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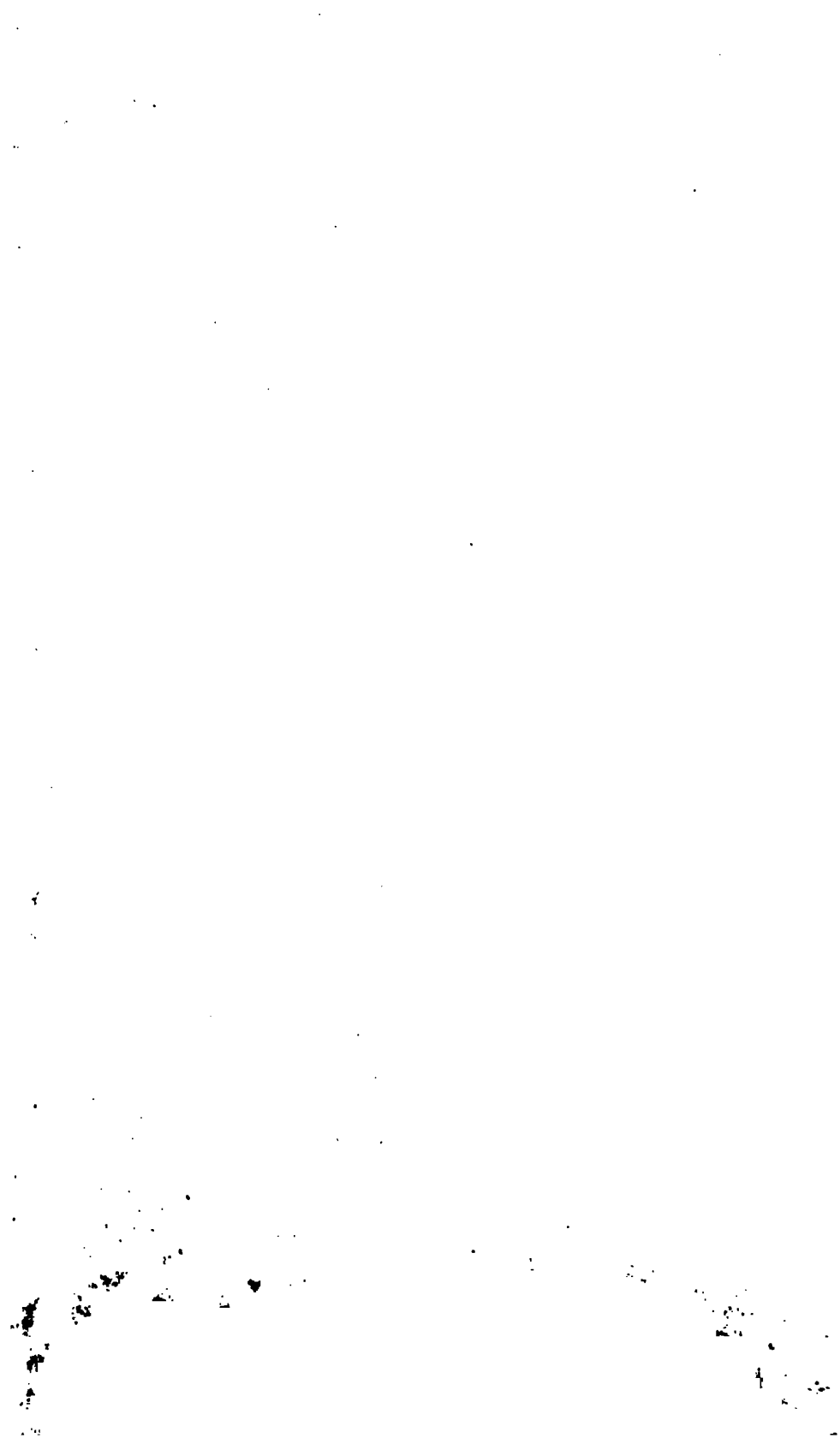
REPORT
OF THE
REVISED SETTLEMENT
OF THE
JHANG DISTRICT
1874-80.



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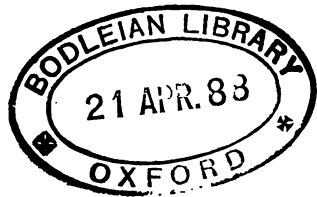




REPORT
ON THE
REVISED SETTLEMENT
OF THE
J H A N G D I S T R I C T
OF THE PUNJAB,

BY
E. B. STEEDMAN, ESQ., B.C.S.
SETTLEMENT OFFICER.

1874—1880.



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1882.



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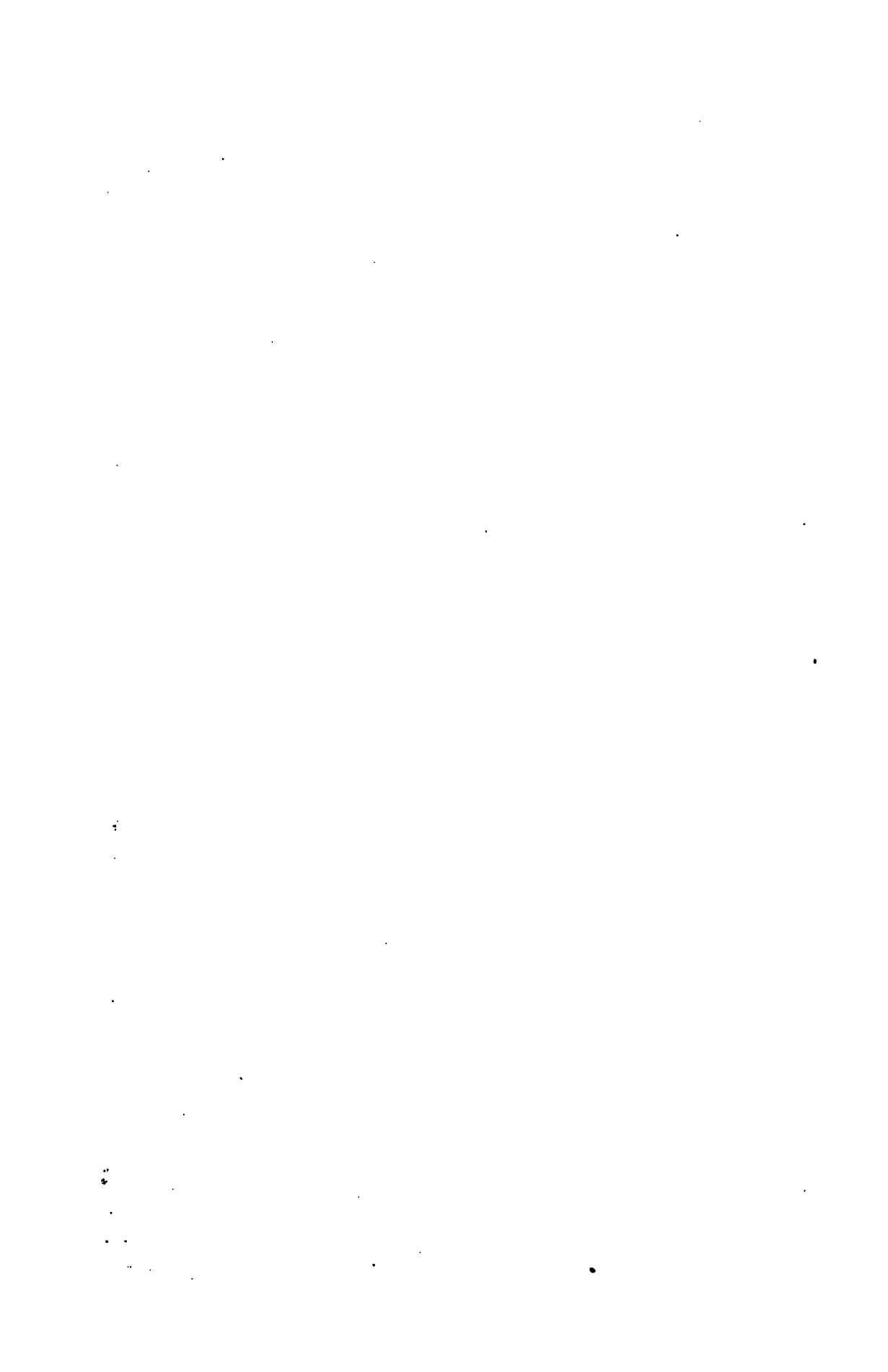
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No. 1150.

FROM

R. G. THOMSON, ESQUIRE,

Offg. Senior Secretary to Finl. Commr., Punjab,

TO

H. C. FANSHAWE, ESQUIRE,

Junior Secretary to Government, Punjab.

Dated LAHORE, 8th October 1884.

SIR,

I AM directed to submit, in original, the final report of the revision of the settlement of the Jhang district, drawn up by Mr. E. B. Steedman, Settlement Officer. In the letter marginally noted No. 267, of 26th September 1882. (which is also submitted in original), the Commissioner of Settlements and Agriculture has furnished a comprehensive review of this report; and the Officiating Financial Commissioner does not consider it to be necessary to add more than a few comments to the remarks of Colonel Wace.

2. The first chapter of the report contains a description of the district, written with Mr. Steedman's accustomed clearness, and showing good powers of physical observation. The theory as to the formation of the Thal country (para. 5) is interesting. The sand dunes described by Mr. Steedman doubtless owe their origin to the southerly winds which appear to prevail in this region, the sand of which they are composed having been transported from distant sources, and possibly, as surmised, from an ancient sea shore. Storms convey microscopic fragments of quartz sand—originally, if not directly, derived from the deserts of Sindh and Bikanir—as far as Simla; and in a country with the small rainfall of Jhang, wind-borne sand in the course of ages slowly accumulates and forms a sensible portion of the soil. On the other hand, Mr. Steedman is, no doubt, also correct in attributing the comparative absence of sand between the Jehlam and the Chenáb, and between the Chenáb and Rávi, to the fertilizing action of these rivers. The Jehlam in particular appears (report, para. 180) to be unusually rich in suspended argillaceous material, and to the floods from this river and its two companions the stiff soil of the intervening doábs must, no doubt, be attributed.

3. The account of the indigenous trees, plants, and grasses in paras. 18-20 of the report is interesting. Seeing how important an industry grazing is in many Punjab districts, the preparation of a manual of the provincial grasses would seem to be most desirable. If such a work

were carried out by a competent botanist, it could hardly fail to be useful. Some of our common grasses, such as "dub" and "dháman," are highly nutritious, while others are just the reverse; and Colonel McMahon believes that something valuable might gradually be effected by zealous district officers in substituting good species for bad, if efforts were made under the guidance of experts who combine scientific with practical knowledge. For instance, it is a common complaint in the west and south-west of the Punjab that the "dháman" grass is diminishing (report, para. 20). If there be any foundation for this belief, it would be interesting, and might be useful, to know the causes of the diminution, and to ascertain whether their action cannot be prevented.

4. The important question of the nature of the policy to be followed in planning irrigation schemes for the Jhang district is discussed in para. 16 of Mr. Steedman's report, and in para. 3 of Colonel Wace's review. Mr. Steedman's prediction that the construction of a canal from Chinot, to irrigate the Bár, would at first have an unsettling effect on the cultivators of the existing villages is, no doubt, well founded; and, if such a canal were made, the results upon these old villages would have to be carefully watched. But the Officiating Financial Commissioner doubts whether this disturbing influence would be permanent, and he is inclined to think that Mr. Steedman has hardly allowed sufficiently for the extra agricultural population, which the new canal would draw to itself from the more crowded districts of the Punjab. Both Colonel Wace and Mr. Steedman agree that there is room for a great extension of inundation canals on the Chenáb Hethár, and as to the beneficial character of such works. Colonel Wace suggests that the Hethár lands should be surveyed and levelled by an engineer who has had special experience in inundation canal operations; and the Officiating Financial Commissioner desires to recommend this suggestion to the favourable consideration of Government.

5. In the third chapter of the report, Mr. Steedman gives a clear account of the somewhat intricate subject of tenures. Here, as generally in the Multán division, village communities, bound by ties of mutual dependence and common responsibility, are foreign to the people. In a few cases tribes or influential families seem to have exercised more or less defined proprietary rights over large tracts. But the revenue management of the time immediately preceding British rule was unfavourable to such rights; and the characteristic tenure of the district is that of the solitary well-owner holding direct from the Government of the day the plot which he has reclaimed from the waste by his labour and capital. But in many cases this tenure has been modified, sometimes by the owner exchanging his unprotected independence for a protected dependence, sometimes by rights conceded by him to the man able to dispose of the capital or labour necessary for cultivation, and often—but not materially—by the attempt made under English rule to assimilate the revenue system to that of the Punjab generally. Colonel Davies has already recorded remarks on the tenures of the district, in para. 7 of his review (as Settlement Commissioner) of the Chinot assessment report, and in para. 5 of his review of the assessment reports of the other two tahsils, and it does not appear necessary to the Officiating Financial Commissioner to offer any further observation

on this subject. He will only add that he does not consider that there is any real doubt as to the responsibility of a usufructuary mortgagee for the revenue due on the lands mortgaged to him (report, para. 88). But he agrees with Colonel Wace that it might be as well to declare this liability by authority, and he is glad to observe that this point has not been lost sight of in the draft Land Revenue Bill recently submitted to Government.

6. With reference to the remarks on the rate of batai which are contained in para. 131 of the report, and which are dealt with in para. 5 of the review by Colonel Wace, the Officiating Financial Commissioner desires to point out that Colonel Davies has already indicated his views in para. 6 of his review of the Shorkot and Jhang assessment reports. It appears to Colonel McMahon that, as a general rule, where customary rates of rent exist, they have their origin in the revenue rates of former administrations. If materials for inquiry were available, it would probably be found that former rulers, who had amassed wealth in the form of cattle, when anxious to extend cultivation, attracted colonists by the offer of stock; and that, in consideration of stock supplied, the ruler's share of the produce was fixed at more than one-half. If a high revenue rate were thus established, it would continue ostensibly in force, although found in practice to be too high for payment without allowances and deductions, such as those now generally admitted between landlord and tenant. Thus we should arrive at a customary rent share high in seeming, but in practice reduced to the rate current in other districts.

Indeed, a consideration of the statistics given by Colonel Wace in the fifth para. of his review would suggest the conclusion that Mr. Steedman's statement, that "there is not a district in the province where the rate of batai is so high," is one of doubtful accuracy. The average rate of batai for the district is 34 per cent. of the produce; but this percentage is arrived at after deduction of fodder crops and kamiána. The figures given in the margin of Colonel Wace's para. 5 exclude—as the Officiating Financial Commissioner understands—the fodder crops, but do not so exclude kamiána fees. But even if a further deduction be made on account of kamiána, a considerable discrepancy would continue to exist between Colonel Wace's statistics and Mr. Steedman's statement. The statistics may not be altogether accurate; but the general conclusion upon which Colonel Wace lays stress—as expressed by him in a demi-official letter to the Officiating Financial Commissioner—is that while he does not think the Jhang rents light, still he does not think them so heavy as they seem at first sight, and he considers that the large deductions allowed are sufficient to meet the requirements of agriculture.

7. Mr. Steedman in paras. 167-170 of his report, and Colonel Wace in para. 7 of his review, offer some very interesting remarks on the indebtedness of the agricultural classes; but some of the issues which they suggest are very broad ones, and hardly suitable for discussion in the present communication. Mr. Steedman's conclusions that "good villages lightly assessed are most burdened with debt," and that the "richest circles furnish the most mortgages," are entirely in accordance with the experience of the Officiating Financial Commissioner. As the result of much inquiry and thought on the subject, Colonel McMahon is

satisfied that the indebtedness of the agricultural classes is not due to a want of moderation in the assessment of the land revenue; but that, on the contrary, when the margin of profit is the largest, and when, in consequence, the credit of the zamindár is the highest, then the temptation to raise loans is the greatest. "So long as a zamindár has credit, so long," writes Mr. Steedman, "will he borrow; and so long as he borrows shall we find our annual returns of land transfers slowly but surely and steadily increasing."

In para. 169 Mr. Steedman writes thus:—"Our system of revenue collection is to some extent answerable for agricultural debt, but the real and true cause of all our woe was the mistaken and misplaced gift of full transferable proprietary right in land to the cultivator, and with it of a vast credit only limited by the value of that proprietary right." The system of revenue collection, to which Mr. Steedman alludes, is presumably the substitution of cash assessments for collections in kind. On this point all that Colonel McMahon thinks he need say is that we could not now go back to a system of collecting the Government land revenue by a share of the produce in kind; and it is doubtful whether the people would really wish to make this reversion if it were optional with them to do so.

In regard to Mr. Steedman's further remark, Colonel Wace writes that he is unable to agree with the Settlement Officer in thinking "that the conferment of proprietary right has probably not benefited the landholders;" nor does Colonel Wace see "how we could possibly have succeeded in making such a settlement of the land as would have prevented the holders from borrowing money on it;" for "good government makes the land valuable, and gives the holders an established title to it." Colonel Wace then sums up Mr. Steedman's views as follows:—"Government policy of granting zamindárs full proprietary rights with a light assessment has mainly contributed to the indebtedness of the agricultural classes." Put in this way, the Settlement Officer's position may seem ridiculous; but the Officiating Financial Commissioner apprehends that what Mr. Steedman views with reprehension is not our having given to zamindárs a light assessment, a good title, and a firm hold upon the land; but the fact that with these we have also given them the power to alienate to those who are not their heirs in satisfaction for past debts or for the supply of present needs or extravagance. Mr. Steedman thinks that we would have done better had we, instead of conferring full proprietary rights on the members of village communities, given to them rights of occupancy only and denied them the right of alienation. The title he would have created would have been something analogous to the English *estate in tail*. His argument is that if the money-lender knew that the zamindár could not alienate his land, loans would be limited to what could be repaid from current income; so that with the loss of credit the growing indebtedness of the agricultural community would cease. The Officiating Financial Commissioner presumes that this system would also entail the prohibition of the sale of land in execution of decrees. The question whether land ought to be so sold is one which belongs rather to the Civil Procedure Code than to the settlement of land revenue. In the days before the Chief Court the rule was not to sell a zamindár's fields in execution;

but now our Courts are guided by the Civil Procedure Code. But the fact is that the old rule revived would at present be of little use unless we are prepared to go the extreme length of prohibiting the foreclosure of mortgages. Otherwise all we should effect would be to make all loans, loans of mortgage.

The discussion of these questions, and of the further question raised by Colonel Wace as to the effect of our judicial system upon agricultural debt, however interesting and important, appears to Colonel McMahon to be beyond the scope of the present review. It is in vain to argue as to what we ought to have done in the past; and the time has hardly yet come in which we can consider with profit whether any steps should be taken to arrest the alienation of land by the agricultural community in the future. In the meantime it is gratifying to be assured by Mr. Steedman that "as far as this district is concerned * * * there is nothing to show that the original proprietors are being rapidly expropriated." If they were, perhaps no great harm would follow; for better men might take their place. Legislation cannot arrest the action of natural causes; and in all communities the extravagant and the profligate will gradually drop out of the ranks and disappear.

8. The seventh chapter of the report deals with the revised assessment of the district. The assessments of the first regular settlements were moderate when first imposed, and as prices rose and cultivation extended they became decidedly light. Mr. Steedman had to deal with an increase of 30 per cent. in cultivation, and of 26 per cent in wells at work. He was thus able to increase the revenue demand of the former settlement by 34 per cent., and the demand of the year preceding the introduction of his new jama by 26 per cent. Mr. Steedman gives a very clear account of his assessment circles and revenue rates; and the Officiating Financial Commissioner has no remarks to offer in addition to those made by the Settlement Commissioner. In para. 8 of his review Colonel Wace remarks that the estimated crop area is probably in excess of the real average, and that the rates of produce assumed are probably a little too high. But on this subject also Colonel McMahon thinks it unnecessary to add anything to what has been already said by Colonel Davies in para. 9 of his review of the Jhang and Shorkot assessment reports.

9. In a certain number of sailab villages fluctuating assessments were introduced. Colonel Wace has appended to his review a statement showing the working of these assessments; and this statement has been verified by the registers maintained in this office. Two further abstract statements are appended to this letter, which show the results of the system up to the present time. There has been a uniform but slight decline in the demand on the Ravi villages, the jama standing at Rs. 2,006 in 1883-84 against Rs. 2,118 in 1880-81, from which year the number of Ravi villages under the system in the Jhang district was reduced to four, the remainder being transferred to Multán. In the Chenab villages, however, the assessment, including *abiána*, rose from Rs. 786 in 1879-80, to Rs. 5,569 in 1882-83; but in 1883-84 it again receded to Rs. 3,679.



10. The system of well assessments described in para. 11 of the Settlement Commissioner's review constitutes the most prominent speciality of the Jhang settlement, and appears to the Officiating Financial Commissioner to have been designed and adjusted with considerable judgment. An abstract statement prepared from the registers of this office is appended, which shows that although the first girdāwari was a decrease of the assessment from Rs. 34,623 to Rs. 32,993 (or adding Rs. 80 for a village, to which the system was subsequently extended, Rs. 33,073), yet every succeeding year has produced an increase, so that in 1883-84 the assessment stood at Rs. 37,867.

11. The proposals in the 13th para. of Colonel Wace's review for the treatment of new alluvial land have the entire concurrence of the Officiating Financial Commissioner, and he desires to recommend them for the definite sanction of Government.

12. In regard to wells leased in Government waste, the Officiating Financial Commissioner concurs with Colonel Wace in thinking that the principles of the assessment adopted by Mr. Steedman were sound; he also agrees in holding that it is better to cancel a lease, when the lessee is found to be permanently impoverished, than to complete his ruin by continuing to collect the rent from a man who is practically insolvent.

13. The question of tirni will be dealt with by Colonel Davies in a separate report. New rules for the appointment and supervision of patwāris will shortly be submitted to Government; and in regard to zail-dārs it is sufficient to note that the Officiating Financial Commissioner agrees with Colonel Wace in thinking that these functionaries should be allowed to collect their own fees.

14. The Officiating Financial Commissioner desires to express his entire concurrence in the high praise which is given to Mr. Steedman by the Settlement Commissioner. So far as Colonel McMahon can judge from the perusal of his interesting report, Mr. Steedman appears to possess some of the best qualifications for settlement work. To ability and power of close observation, he unites great diligence, judgment, and zeal. The services of Munshi Abdul Ghanni, the Extra Assistant Settlement Officer, have also been very valuable, and deserve the recognition which the Officiating Financial Commissioner is glad to give. Among minor officials Colonel Wace has drawn special attention to the merits of Uttam Chand, the district record-keeper, for whom he recommends a gratuity of three months' pay. This recommendation has the concurrence of the Officiating Financial Commissioner, and he would be glad if it could receive immediate sanction.

15. Lastly, I am to ask that the formal sanction of Government may be given to the record of rights prepared by Mr. Steedman, and to the revised assessments. The latter should be sanctioned for 20 years from the date of introduction.

I have, &c.,

R. G. THOMSON,

Offg. Senior Secretary to the Finl. Commr., Punjab.

No. 267.

FROM

Major E. G. WACE,
Settlement Commissioner, Punjab,

TO

F. C. CHANNING, ESQUIRE,
Senior Secretary, to Financial Commissioner, Punjab.

Dated KASAUJI, 26th September 1882.

SIR,

I HAVE the honor to forward Mr. E. B. Steedman's final report on the revision of the settlement of the Jhang district. Pages 206 and 248 of report. These operations were commenced by Mr. Fryer, as Settlement Officer, at the end of 1874; and the measurements were completed by June 1876. At the end of that year Mr. Fryer became Deputy Commissioner of Dera Ghazi Khan, a district recently settled by him, and Mr. Steedman conducted the rest of the operations, which were concluded in September 1880. Thus their total duration was six years. The settlement was supervised up to the end of 1878 by Mr. Lyall as Settlement Commissioner, and for the rest of the time by myself. Mr. Steedman explains in para. 246 some of the difficulties which prevented the earlier conclusion of his operations. But it is due to him to point out that with only five years' previous experience in the service and without the advantage of having supervised the field measurements, he nevertheless succeeded in reporting the assessments of one tahsil within ten months of his taking charge, and of the other two tahsils by the end of the next year (1878). Orders on the first report were not issued till the beginning of 1879, nor on the other two reports till October 1879; and the operations were finished and reported within twelve months of the latter date. Speaking only of what lay in the power of the Settlement Officer himself, this was as rapid progress as could be expected. It is now two years since the final report was first forwarded to me. After submitting it, Mr. Steedman took three months' leave: when he returned I sent it back to him for completion and correction. He resubmitted it by the end of May 1881. It was then sent to be printed at Lahore. But the severe sickness of the autumn of 1881 so delayed the printing that I did not receive the report back from the press until June of this year.

2. The report commences with a description of the physical geography of the district, and this is followed by a very full account of the people and their history. No useful end would be served by an attempt to review this in detail. But I will endeavor to summarise very briefly the leading features of the district. It is situate in the centre of the great alluvial tract enclosed by the Indus and the Sutlej, and has an area of 6007·43 square miles, of which little more than a tenth, or 627 square miles, is cultivated. The rainfall averages only 11 inches per annum ; and the cultivation is consequently confined to the lands in the immediate vicinity of the Chenáb and Jhelum. The former river traverses the district from north to south ; and the Jhelum joins the Chenáb near the centre of the district. Of the whole cultivation about a fourth depends on the river floods (sailáb) ; and the rest is irrigated by wells, of which the depth varies from 15 to 40 feet, according to their distance from the river. The nine-tenths of the district not cultivated is a vast grazing tract, supporting in years of average rainfall large numbers of horned cattle. The population of the last census is 395,666 souls, or 631 to the square mile cultivated and 66 to the square mile of total area. About four-fifths of the population are Muhammadans, and nearly all the rest Hindus. There are few Sikhs. The population now is half as large again as it was reported to be 30 years ago ; and in the return of 1881 above quoted is some 48,000 souls in excess of that of 1868. In land tenures the district differs materially from an ordinary Punjab district. The great waste tracts, known as the Bár, are Crown lands free of all private rights. The cultivated estates are owned thus :—

The physical geography of the district, its people and their history, Chapters I. and II. of the report.

Eight inches kharif. Three inches rabi.

averages only 11 inches per annum ; and the cultivation is consequently confined to the lands in the immediate vicinity of the Chenáb and Jhelum. The former river traverses the district from north to south ; and the Jhelum joins the Chenáb near the centre of the district. Of the whole cultivation about a fourth depends on the river floods (sailáb) ; and the rest is irrigated by wells, of which the depth varies from 15 to 40 feet, according to their distance from the river. The nine-tenths of the district not cultivated is a vast grazing tract, supporting in years of average rainfall large numbers of horned cattle. The population of the last census is 395,666 souls, or 631 to the square mile cultivated and 66 to the square mile of total area. About four-fifths of the population are Muhammadans, and nearly all the rest Hindus. There are few Sikhs. The population now is half as large again as it was reported to be 30 years ago ; and in the return of 1881 above quoted is some 48,000 souls in excess of that of 1868. In land tenures the district differs materially from an ordinary Punjab district. The great waste tracts, known as the Bár, are Crown lands free of all private rights. The cultivated estates are owned thus :—

NATURE OF TENURE.	Number of Estates.	Number of Owners.	Gross Area (Acres).	AVERAGE PER OWNER.	
				Acres.	Revenue assessed.
1—Zamindars (paying in every case but one less than Rs. 1,000 revenue per annum)	272	1,346	72,785	54	9
2—Village communities not paying in common (Pattidári and Bhsiachara)... ..	707	32,504	1,408,596	43	11
Lessees from Government... ..	118	922	58,274	63	9
Total	1,097	34,772	1,539,655	44	10

(Vide Annual Revenue Report 1880-81, Statement XXXIII.)

The average size of an owner's holding in the Punjab at large is only 21 acres, assessed at Rs. 7. Independent of these figures, no officer can have any dealings with the Jhang district without being struck with the large number of sturdy yeomen, holding comparatively large properties and exercising evident influence over their fellow-tribesmen and neighbours.

Again, whereas in the submontane districts 70 or even 80 per cent. of the cultivation is commonly cultivated by the owners themselves, and half of the rest by hereditary tenants, in the Jhang district the owners cultivate only about 40 per cent. of the whole area under cultivation; and the rest is almost entirely in the hands of tenants-at-will, paying on an average a third per cent. of the produce. The agriculturists are for the most part Muhammadan Jats; but the most influential of the land-owning classes, especially the Sial Rájpúts, are described in detail in Settlement Officer's Chapter II.

3. In paras. 14 to 16 Mr. Steedman makes some useful remarks on the manner in which the Chenáb waters ought to be utilised. His argument from the low population of Jhang and the surrounding districts does not seem to me correctly expressed. It is true that the population is low if reckoned on the total area, but if measured against the areas which in the existing conditions of each district it is at present practicable to cultivate, the

DISTRICT.	Population per square mile cultivated (Census of 1881).	Per cent of total area cultivated.
Dera Ismail Khan	348	14
Sháhpur ...	514	17
Gujránwála ...	646	35
Lahore ...	511	50
Montgomery ...	766	10
Mooltan ...	434	21
Muzaffargarh ...	544	20
Jhang ...	681	10

population is sufficiently dense to give to the cultivators a strong motive for resorting to land commanded by new canals. The density of the population in relation to present cultivation (and its poor character) justifies the conclusion that there is urgent need for irrigation works. But I agree with Mr. Steedman in thinking that no new irrigation work ought to be projected without very careful consideration of its probable effect on pre-existing sailáb and well cultivation, and that one of the most useful ways of supplying irrigation would be by utilising the old channels with which the alluvial lands near the Chenáb are scored. This last is what was done by Major Grey on the Sutlej alluvial of the Ferozepore district; and if an officer of equal ability could be sent to Jhang I have little doubt that he would in four or five years do much towards realising Mr. Steedman's plans. But in undertaking any projects of the kind, it should be remembered that Major Grey's work owed its success primarily to the very careful way in which he took levels before he turned a sod anywhere. And as it must be very seldom that a Deputy Commissioner can successfully direct and carry out survey work of this character, I would suggest, as the first step towards carrying out Mr. Steedman's ideas, that a careful survey of the Chenáb-Hethár be made by an engineer

who has had experience of the working of inundation canals. I do not under-rate the difficulty of getting the land-owners to work together in rough irrigation works; but the main motive for this backwardness is rooted in their own experience of their inability to judge the levels correctly. Major Grey never made a mistake in his levels; and as soon as the zamindárs were assured of this, the difficulties of co-operation gradually solved themselves.

4. Chapter III. describes the more common forms of existing rights in the cultivated estates. As I wrote, with reference to the same subject in para. 6 of my letter forwarding the Mooltan Settlement Report, there is a very considerable variety of tenures; arising in part out of the revenue management of the country anterior to our rule, and in part out of the conditions of the existing agriculture.

In a country where most of the land is of no value unless irrigated, and where capitalists have to be encouraged to sink expensive wells, and tenants to undertake the labor of clearing land covered with bush jungle, the capitalist and tenant can stand out for their own terms. And when their disputes come before civil or revenue officers it is necessary that we should be on our guard against attaching general definitions to terms, of which the meaning varies frequently with the tenure or contract to which they are applied. In regard to the question raised in the latter part of the Settlement Officer's para. 88, *viz.*, the responsibility of the mortgagee in possession for the revenue of the land held by him, in spite of any contract to the contrary agreed to by the mortgagor, I would observe that the subject has been dealt with in part by the Financial Commissioner's Circular No. XVII. of 26th November 1879. But all such contracts practically break down as soon as a default occurs in the payment of the revenue, for the default would in such a case be met by process against the land; and if the encumbrancer did not then pay the arrears and engage to pay the revenue in future, the land would be transferred to some other person who would do so. Although, for these reasons, I do not think a revenue officer would at present in such cases have any difficulty in realising Government's revenue, I nevertheless agree with the Settlement Officer in thinking that the Land Revenue Act ought to assert more plainly the liability of a usufructuary mortgagee for the payment of the revenue assessed on the land he holds.

5. Chapters IV. and V. of the report contain an excellent account of the agriculture of the district. I do not think I can usefully add any remarks, except perhaps as regards Agriculture and agricultural stock. Mr. Steedman's observation in para. 131, that there is no district in the province where so large a share of the produce is taken by the owners. That share is at first sight 46 per cent. of the yield. But if para. 203 of the report be referred to, where the full calculation is worked out, it will be seen that the owner really receives only a third of the produce, and of the remaining 66 per cent. at least 55 is retained by

Para. 126. the tenants; for the fodder crops are fed to his cattle, and the reaper's wages (6 per cent. of the produce) are also usually retained by him; and though the kamins take 10 per cent., they take it for the most part in return for work supplied to the

Average share of produce paid by tenants who pay rent in kind.					
DIVISION.	PER CENT. OF PRODUCE PAID AS KIND RENTS.		DIVISION.	PER CENT. OF PRODUCE PAID AS KIND RENTS.	
	By tenants with right of occupancy.	By tenants-at-will.		By tenants with right of occupancy.	By tenants-at-will.
Delhi ...	39	34	Lahore ...	29	34
Hissar ...	34	36	Rāwalpindi ...	50	50
Umballa ...	37	41	Mooltan ...	33	36
Jullundur ...	49	45	D. I. Khan ...	29	35
Amritsar ...	47	42	Peshāwar ...	40	41
Total Province			36	39	
NOTE.—Probably the above rents should be corrected by 10 % on account of fees paid to menials before division of crop).					

tenants. I have deduced the information given in the margin from Statement XXXIV. appended to the last annual revenue report of the province. I should have been inclined to say that in all the submontane districts rent, if taken in kind, is usually half produce, except on inferior land; and substantial modifications of the stated

S. O.'s paras. 126-132. rent, such as are usually allowed in the Jhang district, are much less common in the submontane tracts.

6. In Chapter VI. the Settlement Officer traces the management of

Fiscal history of the district from 1847 to present settlement.

the land revenue from 1847, the first year when it was settled by a British officer, to the commencement of the present revision operations. He also gives some interesting details of the Sikh revenue system. The summary settlement of 1847 is believed to have taken less from the people than the previous Sikh collections by 15 per cent. But it was broken down by the great fall in the value of produce, which occurred after 1849; and the settlement of 1853 consequently gave a further reduction of about 18 per cent.; that is to say, by 1853 the British authorities were collecting only Rs. 70 land revenue for every Rs. 100 realised in 1845 by the Sikh Government. Considering that wheat had fallen in value during the same period from 30 to 50 seers per rupee or even lower than this, and that agriculture had been disorganised first by war and subsequently by this fall in prices, such a result is not surprising. The

Para. 205.

regular settlement operations of four years later raised the revenue again about 5 per cent. Speaking roughly, we may say that the net result of these operations was that the State in 1857 limited its demand to Rs. 75 for every Rs. 100 realised by the Sikh Government in 1845. There are good grounds for believing that the Settlement of 1857 was a fair one, even though it were judged solely by the prices that prevailed during the 10 years, 1850-1859. But with 1860 much higher prices came in, and have since prevailed uninterruptedly; the zamindars being thereby assisted both to pay their revenue and to extend their cultivation. The regular settlement consequently worked well.

7. But in paras. 167 to 170 the Settlement Officer expresses his belief that the land-owning classes are becoming increasingly embarrassed by debt, and that the Government's policy of granting to them full proprietary rights with a light assessment has mainly contributed to this result. I observe that the cultivated area sold since

A.D. 1856 is about 5 per cent. of the whole cultivation; and that the sale price has averaged thirty-eight times the revenue assessment. Besides this 9 per cent. of the cultivation is mort-

gaged at prices averaging thirty-two times the revenue assessment; and the total of these mortgage loans is Rs. 7,37,737. If the whole mortgage loans were converted into purchases at the above average sale price, only an eighth of the ownership of cultivated estates would have changed hands; and only part of this would have gone to new land-owners.

Para 168. Making all allowance for these transfers, and for the frequent carelessness of the agriculturists in respect of debt, which the Settlement Officer describes very truly, still I do not see my way to agreeing with Mr. Steedman's conclusion, that the conferment of the proprietary right has probably not benefited the land-holders. I do not myself see how we could possibly have succeeded in making such a settlement of the land as would have prevented the holders from borrowing money on it (ring the changes as you will on ryatwár and proprietary forms of settlement the result is the same, viz., that good government makes the land valuable and gives the holder an established title to it). And even could such a settlement have been devised, its aim would have been so alien to our experience of what is best for any country in the long run, that it would certainly not have been adopted. Whatever trouble is going on seems to me to have its root not so much in the form of our settlement as in this, that we have rapidly advanced a society of rather loose moral and social constitution from a condition of comparative adversity and depression to one in which they have few anxieties and a very considerable command of money. The weaker members of this society (and there are many of them) consequently fall into the bad habits and trouble described by the Settlement Officer. The condition of affairs is aggravated by the fact that the faults of the money-lending classes are well fitted to those of the land-owners. And when both sides have got into difficulties and resort to our courts, they find both the law and procedure but ill-adapted to agricultural causes. If any one doubts this, let him consult a money-lender who has had experience in recovering debts from agriculturists through our civil courts, or the debtor whom he has pursued. They will both equally complain that the courts are too strong for them; too much legalised and set above any real grasp of the cases that come before them. It is no doubt very difficult to mend all this. But the money-lender has his own way of mending it; he takes out his decree and executes it before he lends his money, or as soon as it approaches an important figure; that is to say, he shuts up his purse-strings tightly until the debtor has given him a usufructuary mortgage; and as soon as he has secured this, he knows that, whatever difficulties are before his debtor, there are not many before him. Under the circumstances it is some consolation to be told by the Settlement Officer

that, whatever the troubles of individuals, there is nothing to show that the original proprietors are being rapidly expropriated. It seems to me rather too soon to say what all this is tending to. Those who make light of the increasing mortgage debt, and those who take a gloomy view of it, alike seem to me to be forejudging the event. And the only remark I think I can safely make is that much of the trouble has been aggravated by our tendency to frame our civil law and procedure too much on European models ; and by our unreadiness to adapt these models to the wants of the agricultural classes, as described by themselves, or as known to those officers who are most associated with the agriculturists.

8. Chapter VII. contains a very clear and intelligible description of Mr. Steedman's assessments. The result has been to increase the Government land revenue by a third, as compared with the demand of the first year of the regular settlement, and by a fourth as compared with the demand of the last year of that settlement.

Para. 205. Any officer of practical experience in assessment work will support me when I say that a Settlement Officer who secures such a gross result for his district at large has done as much as can be demanded of him, and has secured as great an increase as it is wise for Government to expect. Whatever shortcomings official criticism may suggest in the detailed reasons given by the Settlement Officer for his assessment, the main argument remains that a very considerable and sufficient increase of revenue has been secured. Consequently, such few remarks as I shall make on the subject will not, I hope, be understood as expressing any doubts that Government's interests have been sufficiently asserted. The

produce estimate would in the case of each tahsil have warranted an assessment half as high again as that actually imposed. The Settlement Officer thinks that in this estimate neither the crop areas nor the rates of yield are exaggerated ; and finally gives it as his opinion that in the special circumstances of the Jhang district Government cannot safely demand more than he has now assessed, *viz.*, one-third of the rent shown by the produce estimate. I confess that I am not convinced of the soundness of the produce estimate. It was made admittedly on one year's crops, and though the Settlement Officer explains why he thinks these areas a fair average, it is opposed to

Para. 198-199. my experience to believe that in a district like Jhang one year's observation of the crops would probably give us a fair average of the agriculture. It might do so ; but this kind of work is very much like guessing. Moreover, if column 18 of Statment A. be compared with column 42 of Statement D., appended to the report, it will be seen that the produce estimate assumes an average crop area almost equal to the cultivated area (see end of para. 198) ; and in the conditions of the Jhang agriculture it seems to me almost certain that such an estimate is too high. I also feel some doubt about the assumed rates of yield, *viz.*, that being rates applied to large areas, much of which is grown under unfavorable circumstances, they are probably a little too high. For these reasons, I doubt whether Mr. Steedman's assessment represents, as he is himself inclined to admit, only a third of the rent. I am still less inclined to admit that the State's demand could properly be fixed permanently at so low a proportion of the rent. Four-fifths of the cultivation in

Shorkot is sailáb land; and about a fourth of the Jhang and Chinot cultivation is of the same class. The share of sailáb

Appendix I. at end
of Statement D.

Para. 131.

produce received by the owners would appear to be considerably larger than what they receive from the well lands. On the whole, what I should be inclined to say would be, that on the sailáb lands the State may in the long run expect to secure half the rent; but that until the wells are assisted by canals, we must be prepared to accept rather less than half the estimated rent from lands irrigated by wells. The owner's risk and losses on the well lands are much greater than on sailáb lands; and only a small proportion of the wells are as yet aided by sailáb or by canals and jhallars.

If the tables given in paras. 175 and 182 are compared, it will be seen that, except in the Chinot tahsil, the great mass of the sailáb lands have been assessed at about one rupee per acre, and the well lands at from a fourth to a third more. These are no doubt light rates; but it should be borne in mind that the crops grown from year to year both on the sailáb and well lands vary a good deal in area according to the character of the season. The Chinot sailáb was assessed at only 12 annas, and the reasons for this are given in paragraph 178 of the report. Mr. Lyall was Settlement Commissioner when this rate was fixed; and both for this reason and because I have not any detailed knowledge of the Chinot tahsil, I do not think I can properly make any remarks on this rate. The Settlement Officer's remarks indicate that he would have assessed a higher rate, but that it would have necessitated a larger gross increase than it was desirable to demand.

9. Similarly as regards the question whether a fluctuating assessment

The necessity or
not of applying
a fluctuating assess-
ment to the sailáb
lands.

should or should not be applied to the sailáb lands of the Jhelum and Chenab, the question was decided in the negative by Mr. Lyall before I succeeded to his office, and on a greater knowledge of these rivers than I myself possess. I therefore do not think I can properly offer an opinion on the point. But it seems to me probable that the

Report, paras.
176-77.

strong dislike to a fluctuating system expressed by the zamindárs may have been due less to any inherent objections to a system that would relieve them materially when bad seasons occur (as they not unfrequently do on sailáb lands) than to a well-founded belief that the fluctuating system would have resulted in a higher

Compare column
8 of Statement in
para. 205 and
column 15 of State-
ment A., appended
to report.

assessment than we thought it safe to impose when applying a fixed assessment to a rather precarious cultivation. If the sailáb cultivation of a village has increased from 500 to 1,000 acres, then, in applying a fixed assessment, I should be unwilling to increase the assessment in the same proportion. I should bear in mind that I was asking the owners to sign a 20-year lease, and that I could not be sure how far the increased cultivation was stable. But let the assessment be fluctuating, and I feel little hesitation of this nature; for even if I do order the crops to be assessed at one rupee an acre, I have no anxiety on

the subject, as I know, that only so many rupees will be assessed as acres of crop are matured. I may order a temporary reduction of the rate if I think I am enforcing too sudden a change in the owner's circumstances, but still the assessment of each year will be according to the crops matured. And this is an assessment which an owner will hardly welcome if his cultivation has much increased or if he hopes it will do so in future.

The system has been applied to 16 villages : report, paras. 207-208, also 177. 10. But I do not think Mr. Steedman was influenced in his conclusions on the subject by any strong objection to the fluctuating system. On the contrary, in 16 sailáb villages (of which five Rávi villages, have subsequently been transferred to the Mooltan district) he introduced fluctuating assessments with the Government's

Tahsil.	Circle.	Villages.
Chiniot...	Halkehwhah ...	1. Mianwál. 2. Changranwla.
Jhang ...	Hethár-Chenáb	3. Daduwána. 4. Syalanwála. 5. Zindu Shah. 6. Bindi Mahini.
Shorkot...	Hethár-Cheneb Hethár-Rávi ...	7. Bad Rajhana. 8. Khub Paro Huda. 9. Jahana Merali. 10. Lahera. 11. Kund Sargana. And five other villages since transferred to the Mooltan district.

sanction; and the details of these settlements are explained in paras. 207-208 of his report. You no doubt have in your office data of their subsequent results. The whole amount of revenue concerned in them is only about Rs. 4,200. If these villages are well managed, we may expect any sailáb village that is hard pushed by its fixed assessment to apply for a fluctuating assessment. If they are care-

lessly managed, then the zamindárs' objections to fluctuating assessments will probably be permanently strengthened.

11. In paras. 181 to 185, the Settlement Officer gives an excellent description of the principles on which lands irrigated by wells have usually been assessed, as regards which I will only say that I think the principles on which the Settlement Officer has acted are sound. Then follows, in paras. 186-196, an account of the fluctuating assessment applied to tracts where the cultivation is entirely dependent on wells of which the stability is precarious. The system so introduced is a simple assessment by wells, remissions being given for every well falling out of work, and assessments being added after short periods of grace for every well newly brought into gear. The system is thoroughly well suited to the tracts to which it has been applied, and it will be very easy to work it. It is practically the old Sikh system with some objectionable features lopped off. The amount of revenue collected on this system is about Rs. 26,000. And if any village dependent on wells now assessed at a fixed assessment subsequently needs relief, such relief should, I think, be given by extending to it the fluctuating assessment by wells which the Settlement Officer describes.

12. I append to this letter two statements showing the rates sanctioned for each village placed under fluctuating assessment; both sailáb villages and villages in which the assessment fluctuates by wells. These statements were prepared under orders received from you, and are valuable for reference. They should, I think, be added to the appendices of the Settlement Officer's report.

Proposed rates and rules for future alluvion and diluvion assessment, para 241.

13. Before passing on to the few other questions requiring notice, I would draw attention to some very important proposals relating to future di-alluvial assessment made by the Settlement Officer in his para 241.

(i) In the first place he proposes that unculturable land made culturable by the action of the river should not be assessed until it is actually cultivated. In addition to the reason stated by the Settlement Officer for this proposal, which reason entirely accords with my own experience, I wish to add the following remarks. Occasionally owners with large herds, or careless managers, will purposely neglect to cultivate new alluvial, preferring the grazing profits; and the proper way to treat a case of this kind is by action under the Land Revenue Act, Section 27. But, as a general rule, the zamindárs may be depended on to cultivate new alluvial as soon as it is culturable. And a revenue officer of whatever experience will rarely if ever be able to form a better opinion on the question than will be expressed by this action on the part of the zamindárs themselves. It is thoroughly unsafe to encourage either patwáris or tahsildárs to assess new land with cultivated rates before it is actually cultivated. It is only rarely that a trained settlement officer will allow himself to make such an assessment. And as an ordinary procedure in respect of new alluvial land, it ought to be expressly discountenanced.

(ii) In the next place, the Settlement Officer recommends that new alluvial should ordinarily be assessed at the following rates per acre:—

In the Chiniot tahsil	14 annas.
On the Chenáb in the Jhang tahsil before its junction with the Jhelum	15 „
On the Jhelum and on the Chenáb after its junction with the Jhelum	16 „

These are the rates used in the present assessment, except the Chiniot rate, which is stated slightly higher for reasons which will be understood if the Settlement Officer's para 178 be referred to. I agree in the necessity for this proposal. All the assessment reports recently submitted to the Financial Commissioner contain a similar proposal in respect

of new alluvial ; and if adopted, we shall by so much bring the Jhang system into agreement with the practice recently introduced in the Deraját division and in the Mooltan and Muzaffargarh districts. In those districts the fluctuating sailáb assessment is always by the rates of the circle, and not by village rates. It is both unfair to the owners and wasteful of the State's revenue to allow a wide diversity of rates, dependent partly on chance circumstances and partly on the tahsildár's or patwári's initiative. But after consulting the Settlement Officer, and with his concurrence, I recommend that new alluvial cultivated with peas, massar, metra, samuka, or pokh rice be charged only eight annas an acre. As soon as a better crop is cultivated, the full rate should be imposed. The crops named by me

are those sown in new land of a poor character, before the zamindár is assured of the quality of the land. If these crops yield well, he will then try wheat or gram.

There is not the smallest chance of his continuing to sow peas on land where he can cultivate wheat successfully. In Muzaffargarh one year's grace at half rates, and in Mooltan two years' grace, is allowed on new alluvial. But the true test with reference to which land should be raised from half to full rates is the cultivation of a crop belonging to a superior class.

- (iii) The Settlement Officer's remarks contemplate the imposition of a fair grazing rate on new alluvial which is not cultivated, but which affords pasturage for cattle. This also is in agreement with proposals recently submitted from other districts under settlement. Following those proposals, the rate should, I think, be one anna per acre ; and it should not exceed that rate, though for sufficient reasons a lower rate should be allowed.

To resume : if these proposals are sanctioned, then unculturable ste improved by the action of a river will be assessed as follows :—

(a) Land fit for grazing at one anna per acre, or in special cases at lower rate ;

(b) Cultivated land ; at eight annas per acre for first year, or as long only cultivated with pokh rice, samuka, mattar, massar, or metra ; but at full rates after first year, as soon as a better crop is sown, viz. :—

Chiniot tahsil	...	...	...	...	...	14 annas
Jhang and	{	Chenáb above junction with the Jhelum	...	15	„	
Shorkot tahsils	{	Jhelum and Chenáb below Jhelum junction	...	16	„	

Before finally framing the above proposals I sent them to Mr. Sedman for his opinion, and he writes that he agrees fully with them. Both the Settlement Officer and myself attach the greatest importance to the issue of definite orders on the subject dealt with in this paragraph.

14. Chapter VIII. contains an account of the assessments on date palms, sajji, and leased wells made by the Settlement Officer. The date revenue he has raised 50 per cent., and the sajji revenue about a quarter. The gross sums involved (Rs. 3,087 and Rs. 825) are not of importance. The assessment on leased wells also he has raised. 50 per cent., viz., from Rs. 4,073 to Rs. 6,153; and he gives a good account of the principles on which this assessment should be made and on which such leases should be managed in the future. I agree with him that when a lessee is evidently unsuccessful, it is wiser and kinder to cancel the lease than to allow it to run on in difficulties. There is also a small revenue derived from the catch cropping of Bár lands. The Settlement Officer did not manage this, but his remarks on the subject are useful.

Assessment on date palms, sajji, leased wells and barani lands.

Paras. 210 and 211.

Paras. 221-223.

Para. 224.

15. Similarly, the Settlement Officer was not charged with the management of tirni revenue. But moving about as he did continually for 3½ years among the people from whom this revenue is levied, he had unusually good opportunities of forming a judgment concerning the system in vogue. His summary of the past history of the tax will no doubt be very useful. And I think that my own opinion, had I been called on to express one, would have been in the same direction as the Settlement Officer's. But the matter is not before the Financial Commissioner in connection with this report. It seems doubtful whether the revenue now levied is as high as it ought to be. A few small but beneficial changes introduced into the management of the trans-Chenáb waste under the action of the Settlement Officer are described in his paras. 218 and 219. They do not call for detailed notice, being in accordance with principles generally approved by Government.

The tirni or grazing revenue.

Paras. 212-220.

Para. 217.

16. Very few remarks are called for in respect of Chapter IX. The record of rights is in the usual form, and has been very well drawn up. On the wells the number of fields has been unnecessarily increased; but this occurred in the measurement stage, before Mr. Steedman took charge.

The records of right, Chapter IX.

The details given concerning the settlement record, and the processes by which it was formed, are of a character that will assist district officers to understand the features of the records that are peculiar to the district.

17. Mr. Steedman regrets that the zaildárs are required to collect their own fees. Hitherto this has been the universal practice in the Punjab. My own view is that the district and tahsil treasuries should not be unnecessarily encumbered with the collection and disbursement of small items of this nature; and I believe that it is mainly for this reason that the present practice was established. Also in the long run the collection of his own fees by a zaildár probably constitutes something towards establishing a

Zaildárs and patwáris, paras. 238 and 239.

er state of relations between him and his lambardárs; and at the introduction of the system it is, I think, right to apply the ordinary and to require the zaildárs to collect their own fees.

As regards the existing rules for appointing patwáris, to which the Settlement Officer states objections that are very widely felt, I understand that proposals for amending the rules in the direction desired by the Settlement Officer are before the Financial Commissioner, and will shortly be submitted to Government.

18. The record of rights has been made over to the Deputy Commissioner, as contemplated in Section 17 of the Land Revenue Act, by the order of Government noted in the margin.* It now remains only to obtain the sanction of Government to the record, and to the assessment. The leases of all three tahsils have, under the orders quoted in the margin,† been given for 20 years only. The district is as yet in a very backward condition, and there are good grounds for hoping that during the coming 20 years the conditions of its present assessment (both of the lands near the river and of those at a distance from it) will be radically altered by the development of canals and inundation channels from the Chenáb river. This development will probably be promoted mainly by the direct action of Government; and the financial return due to Government's expenditure may be affected materially if a longer revenue lease than 20 years is now given. The new leases of the Chiniot tahsil were enforced from the kharif of 1879, and those of the rest of the district from the rabi of 1880.

19. The settlement has cost a fraction less Rs. 4,32,000; and in addition Rs. 31,000 of settlement fees have been collected and expended. The assessment has added (deducting the zaildár's one per cent.) about Rs. 70,000 to the Government fixed rent roll; besides some other small items of miscellaneous revenue noted in Chapter VIII. The cost of the settlement will therefore have been repaid in six years from the date of the currency of the assessments.

20. Mr. Steedman speaks favorably of the assistance received by him from Abdul Ghani, the Extra Assistant Settlement Officer of his settlement, and I think that the praise thus given is well deserved.

I should have been glad if I could have noticed the Superintendent in like terms; but their various shortcomings added much to the pains and responsibilities of the Settlement Officer.

Mr. Steedman's own work will, I trust, be considered deserving of very praise; and he already possesses, in the grateful recollections of the owners, the other half of a Settlement Officer's reward. The record

work was supervised very closely by him. He had a detailed knowledge of each village, such as only the best settlement officers acquire. And the assessment work from first to last was done entirely by himself at the cost of great labor and attention.

I should be glad if the Government would sanction a gratuity of three months' pay to the district record-keeper, Uttam Chand, whose deserving services are noticed by the Settlement Officer. In former days we had methods of rewarding such services, from which we are cut off by the stricter rules of account now in vogue. The work of a district record-keeper is much increased by settlement operations, especially when he has to take over the records. And it is within my knowledge that the Jhang record-keeper, Uttam Chand, exerted himself in an unusual degree to Mr. Steedman's material assistance. It is a common complaint now with these record-keepers, that we add much to their labors and do nothing for them. And in so far as they may deserve well of us, it will assist our work if Government will remove, by a reward such as I now recommend, any just foundation that there may be for this feeling.

I have, &c.,

E. G. WACE, MAJOR,

Commissioner of Settlements and Agriculture, Punjab.

STATEMENTS.

(Referred to in para. 12.)

Statement showing the Villages subject to the system

Reference to Government's proceedings or other orders in which these fluctuating assessments are sanctioned.	Tahsil.	Circle.	Serial number.	Villages.	Fixed land revenue assessed on the portions of the villages subject to the ordinary fixed system.
No. 8, for August 1880, Department Revenue, Agriculture and Commerce.	J H A N G.	H E T H A R C H E N A B.	A.—Chenab villages.		
			1	Daduwana ...	232
			2	Syalwanwala ...	218
			3	Zindu Shah ...	NIL.
Secretary to Government, Punjab's No. 1144, dated 29th November 1880.	...	...	4	Bindi Mahini ...	...
No. 7, for September 1879.	...	...	5	Mianwal ...	280
Department Revenue, Agriculture and Commerce.	Chiniot.	Halkewak.	6	Changranwala ...	544
Secretary to Government, Punjab's No. 1144, dated 29th November 1880.	Shorkot.	Hethar Chenab.	7	Bad Rajhana ...	...
			B.—Ravi villages.		
			8	Khub Paro Huda	220
Para. 13, of Settlement Secretary to Financial Commissioner's No. 187C., dated 1st October 1879, to Settlement Commissioner.	Shorkot.	Hethar East.	9	Jahana Merali ...	48
			10	Lahera ...	26
			11	Kund Sargana ...	360

Note.—The five villages of Class B. transferred to the Moolman

Fluctuating Sailaba Assessment in the Jhang District.

RATES OF FLUCTUATING LAND REVENUE.			REMARKS.
Rate per acre on sailáb cultivation.	Lump rate of abiána per well.		
15 annas, and after 5 years, i.e., from Rabi 1884-85, Re. 1-1-0.	Rs. 8 per pakka well and in one special instance Rs. 4 for a kacha well.		In villages 1, 2, 3, 4, 5, 6 and 7 the area subject to fluctuating assessment is sometimes the whole area of the villages and sometimes one part or block only, the other part or block being under separate fixed assessment. Nos. 1, 2, 5, and 6 have such blocks under fixed assessment; the others have not. With the blocks under fixed assessment the fluctuating system has nothing to do. The conditions of assessment in respect to the blocks under fluctuating system are—(1) that all cultivation within such blocks, whether, on land attached to wells new or old or not, and whether the crop is grown with well water, river water, or rain water, will pay the sailába rate; (2) in addition to this rate on cultivation a lump sum abiána was assessed at settlement on wells then existing, and will be paid by such wells. This abiána will be remitted if the well is cut away by diluvion or if floods make it incapable of use by filling it up or by causing it to fall in. It will not be remitted merely because the owner throws the well out of use or fails to repair it. New wells made or brought into use after settlement will not be assessed with abiána, but cultivation of land attached to them, whether it gets sailáb, flood or percolation or not, will pay the sailába rate. The conditions are the same as for sailáb villages in the Mooltan district, viz., that the lands attached to each well existing at settlement are demarcated and each such well area gets a fixed assessment worked out at cháhi and sailába rates, which covers all demand for land revenue upon all cultivation within it, whether the crop is grown with well water or sailáb or in any other way. The boundary of the well land is shown in the village map, and the fixed assessment is only remissible in case of diluvion under the ordinary di-alluvion rules. The remaining area of the village outside such demarcated well lands is subject to fluctuating assessment; that is to say, all sailába or jhallari cultivation thereon is charged with the fluctuating rate. If, however, a new well is sunk therein after settlement and adjacent land is cultivated with the well water only, the fluctuating rate is not applied: if the cultivation is partly with the well water and partly by sailába, flood, or percolation, the rate is applied.
Do. ...	Rs. 8.		
Do. ...	Rs. 10, and in one special instance Rs. 5 for a small well.		
Re. 1-1-0.	Rs. 8.		
12 annas.	...		
Do.	Rs. 10 per well.		
Re. 1-2-0.	Rs. 8 ..		
Sailab. Jhallar.			
Re. 1. Re. 1-4-0.	...		
Re. 1. Re. 1-4-0.	...		
Re. 1. Re. 1-4-0.	...		
Re. 1. Re. 1-4-0.	...		

District have been excluded from this Statement.

E. G. WACE, Major,
Commissioner of Settlements and Agriculture.

Statement showing the Assessment Rates fixed for new wells in the Villages of the Shorkot and Jhang Tahsils which are subject to the fluctuating system of well assessment (referred in para. 19).

Serial number.	Name of circle.	Name of village.	Rate of assessment on new wells.	Serial number.	Name of circle.	Name of village.	Rate of assessment on new wells.
	K A C H I.	<i>Tahsil Shorkot.</i>	Rs.		K A C H I—continued.	<i>Tahsil Shorkot—continued.</i>	
1		Perowana	15	23		Kot Kima	1
2		Dargahi Shah	13	24		Mirnewāla	1
3		Basti Sultan Lishari	11	25		Tango	1
4		Chah Bhareri	10	26		Dari Gondal	1
5		Sat	10	27		Haveli Jiwan Shah	1
6		Uch	8	28		Laghari	1
7		Lishari	14	29		Dulowāna	1
8		Paharpur	15	30		Basti Galkāla	1
9		Basti Nusrat	16	31		Mahmud Kōt	1
10		Yusa	14	32		Sialkot	1
11		Tiba Ghali	13	33		Jana	1
12		Tror	13	34		Godara	1
13		Rher	12	35		Waji	1
14		Rodhu Sultan	12	36		Basti Lal	1
15		Hassu Balel	12	37		Kapuri	1
16		Fattahpur Parti	14	38		Dul	1
17		Dagri	12	39		Sewa	1
18		Bahar	11	40		Shah Yusafi	1
19		Kot Bahadar Shah	12	41		Kassowana	1
20		Mir Muhammad	12	42		Kundal Khokran	1
21		Chah Andrun	12	43		Kulachi	1
22		Sabki	12	44		Isawala	1

Statement showing the Assessment Rates fixed for New Wells—continued.

Serial number.	Name of circle.	Name of village.	Rate of assessment on new wells.	Serial number.	Name of circle.	Name of village.	Rate of assessment on new wells.
		<i>Tahsil Shorkot—continued.</i>				<i>Tahsil Jhang—continued.</i>	
45	B A R C I R C L E.	Piranwála	11	69	B A R—continued.	Kot Sahai Singh	13
46		Chayanwála	12	70		Lakh Badhar	14
47		Kot Lal	12	71		Gagrana	12
48		Kot Mirza	12	72		Pindi Madake	12
49		Sadiq Nihang	12	73		Majhi Sultan	11
50		Farid Mahmúd Kathia ...	12	74		Isabha	12
51		Kaluwala	12	75		Basti Shah Shakur ...	13
52		Bhangú	13	76		Kaurian	12
53		Kakki Kathia Kohna ...	12	77		Naruli	6
54		Mahla	10	78		Nauaksar	5
55		Khudayar Kathia ...	13	79		Raranwali	11
56		Kakki Kathia Nau ...	13	80		Haveli Lal... ..	11
57		Manga Afghanan ...	13	81		Gilmala	12
58		Mahamadwála	10	82		Baghri	11
59	B A R.	Mari Ghuman	14	W A S A T.		Maluwana	15
60		Dhat Lak	14			Kadimi	14
		<i>Tahsil Jhang.</i>				Bhajowana	15
61		Mukhiana	12	83	K A C H I.	Loha Bher... ..	9
62		Satiana	14	84		Sherowana	11
63		Shekh Chuhar	10	85		Dosa	10
64		Nikka Doulatana ...	14	86		Shah Mohamad	11
65		Kaluwala	13	87		Fatah Shah	11
66		Dhil	15	88		Kot Naulan	12
67		Athu	11	89		Kotli Bakur Shah ...	11
68		Basti Ghazi Shah... ..	15	90			
				91			
				92			

Statement showing the Assessment Rates fixed for New Wells—concluded.

Serial number.	Name of circle.	Name of village.	Rate of assessment on new wells.	Serial number.	Name of circle.	Name of circle.	Rate of assessment on new wells.
	K A C H I—(continued.)	Tahsil Jhang—continued.			K A C H I—concluded.	Tahsil Jhang—concluded.	
93		Kharal	15	99		Jamali Khurd	15
94		Kotla Ahmad	12	100		Janpur	15
95		Wasu Wasthana	12	101		Kot Bahadar	15
96		Dal	10	102		Jamali Kalan	14
97		Kaisarwala	9	103		Wasawa	12
98		Daira Sakhira	11				

Index to Settlement Commissioner's No. 267, dated 26th September 1882.

No. of para.	SUBJECT.
1	Forwards final report, Jhang settlement.
2	The physical geography of the district, its people and their history.
3	Facilities for rough canal irrigation.
4	Description of rights in the cultivated estates, their variety, effect of mortgage-contracts on the security of the land revenue.
5	Agriculture and agricultural stock.
6	Fiscal history of the district from 1847 to present settlement.
7	Increasing debt: how far attributable to the character of our settlement of rights.
8	The new assessments.
9	The necessity or not of applying a fluctuating assessment to the sailab lands.
10	The system has been applied to 16 villages.
11	Fluctuating well assessments.
12	Statements of rates sanctioned for villages under fluctuating assessment.
13	Proposed rates, and rules for future alluvion and diluvion assessment.
14	Assessment on date palms, sajji, leased wells and barini lands
15	The tirni or grazing revenue.
16	The record of rights.
17	Zaildars and patwaris.
18	Sanction to the record and the term of the settlement.
19	Cost of the settlement.
20	Notice of officers.

ENCLOSURES :—Two statements referred to in para. 12.



ABSTRACT STATEMENT
SHOWING THE
FLUCTUATING REVENUE ON WELLS
IN THE JHANG DISTRICT,
FOR 1879-80, 1880-81, 1881-82, 1882-83 and 1883-84.

ABSTRACT STATEMENT SHOWING THE FLUCTUATION

1	2	3	4	5	6	7	8	9	10	11	12	13
Tahsil.	Assessment circle.	Year.	Number of villages.	ANNUAL ASSESSMENT LAST REPORTED.				DEDUCT FOR WELLS FALLEN OUT OF USE.			ADD FOR NEW WELLS NOW ASSESSED.	
				Number of wells paying revenue.	Jama per annum on wells.	Grazing assessment classed as fluctuating.	New wells not yet assessed.	Number of wells.	Rate at which assessed.	Jama per annum.	Number of new wells assessed.	Rate at which assessed.
J H A N G.	Bar ...	1879-80 ...	22	251	4,563	...	35	21	different.	312	9	different.
	Wasat ...	1879-80 ...	2	42	760	...	2	9	...	134	1	14
	Kachi ...	1879-80 ...	18	396	6,468	...	9	28	...	356	1	12
	Total...		42	699	11,791	...	46	58	...	802	11	...
	Bar ...	1880-81 ...	22	249	4,363	...	26	4	...	67	21	...
	Wasat ...	1880-81 ...	3	38	720	...	1	2	...	40	2	...
	Kachi ...	1880-81 ...	18	369	6,124	...	8	7	...	123	16	...
	Total...		43	656	11,207	...	35	13	...	230	39	...
	Bar ...	1881-82 ...	22	266	4,550	...	21	2	...	31	34	...
	Wasat ...	1881-82 ...	3	38	708	...	3	3	...	60	2	...
	Kachi ...	1881-82 ...	18	378	6,213	260	21	5	...	103	26	...
	Total...		43	682	11,471	260	42	10	...	194	62	...
	Bar ...	1882-83 ...	22	299	4,952	...	18	4	...	52	19	...
	Wasat ...	1882-83 ...	3	37	667	...	5	2	...	44	7	...
	Kachi ...	1882-83 ...	18	399	6,422	259	39	10	...	121	27	...
	Total...		43	735	12,041	259	62	16	...	217	53	...
	Bar ...	1883-84 ...	22	314	5 17	...	26	3	...	42	5	...
	Wasat ...	1883-84 ...	3	42	73	...	1	2	...	23	1	...
	Kachi ...	1883-84 ...	18	416	6 66	259	56	12	...	159	27	...
	Total...		43	772	12,506	259	83	17	...	224	33	...
	Total for the Tahsil	1879-80 ...	42	699	11,791	...	46	58	different.	802	11	different.
		1880-81 ...	43	656	11,207	...	35	13	...	230	39	...
		1881-82 ...	43	682	11,471	260	42	10	...	194	62	...
		1882-83 ...	43	735	12,041	259	62	16	...	217	53	...
		1883-84 ...	43	772	12,506	259	83	17	...	224	33	...

REVENUE ON WELLS IN THE JHANG DISTRICT.

15	16	17	18	19	20	21	22	23	24	25
TOTAL ASSESSMENT NOW REPORTED.				DEDUCTION ON ACCOUNT OF		Net khalsa fluctuating revenue.	KHALSA DEMAND FOR EACH HARVEST OF THE YEAR UNDER REPORT.		Number of new wells at work, whose period of protection last not expired, and which, therefore, are not assessed.	Average annual fluctuating assessment on wells since the system was introduced, including assigned revenue, but excluding grazing assessment, and including the assessment of the year under report.
Number of wells paying revenue. columns 5 and 12, minus column 9.	Jama assessed on wells per annum, columns 6 and 14, minus column 11.	Grazing assessment classed as fluctuating revenue.	Total fluctuating assessment of the year.	Jagir, mafi and inama.	Zaildari.		Kharif.	Rabi.		
404	6,908	...	6,908	...	69	6,839	...	4,605	17	6,908
883	14,958	...	14,958	474	145	14,339	...	9,656	44	14,958
1,287	21,866	...	21,866	474	214	21,178	...	14,261	61	21,866
407	6,917	...	6,917	25	69	6,823	2,250	4,594	43	6,913
912	15,309	633	15,942	580	154	15,208	5,021	10,237	89	15,133
1,319	22,226	633	22,859	605	223	22,031	7,271	14,831	132	22,046
424	7,109	...	7,109	25	71	7,013	2,321	4,722	54	6,978
973	16,001	633	16,634	522	162	15,960	5,296	10,743	127	15,422
1,397	23,110	633	23,743	547	233	22,963	7,617	15,465	181	22,400
447	7,422	...	7,422	25	74	7,323	2,390	4,880	45	7,089
1,030	16,619	631	17,250	560	167	16,523	5,439	11,015	132	15,721
1,477	24,041	631	24,672	585	241	23,846	7,829	15,895	177	22,810
449	7,373	...	7,373	25	73	7,275	2,423	...	57	7,146
1,060	16,924	617	17,541	578	170	16,793	5,597	...	107	15,962
1,509	24,297	617	24,914	603	243	24,068	8,020	...	164	23,108
1,287	21,866	...	21,866	474	214	21,178	...	14,261	61	21,866
1,319	22,226	633	22,859	605	223	22,031	7,271	14,831	132	22,046
1,397	23,110	633	23,743	547	233	22,963	7,617	15,465	181	22,400
1,477	24,041	631	24,672	585	241	23,846	7,829	15,895	177	22,810
1,509	24,297	617	24,914	603	243	24,068	8,020	...	164	23,108
1,939	32,993	...	32,993	794	322	31,877	...	21,466	96	32,993
2,001	33,697	893	34,590	1,244	334	33,012	10,886	22,232	174	33,345
2,132	35,154	892	36,046	1,182	356	34,508	11,431	23,247	243	33,948
2,215	36,547	890	37,437	1,001	363	36,073	11,837	24,043	260	34,597
2,297	36,991	876	37,867	1,052	369	36,446	12,143	...	236	35,076

ABSTRACT STATEMENT SHOWING THE FLUCTUAT

1	2	3	4	5	6	7	8	9	10	11	12	13	14
TAHSIL.	Assessment circle.	Year.	Number of villages.	ANNUAL ASSESSMENT LAST REPORTED.				DEDUCT FOR WELLS FALLEN OUT OF USE.			ADD FOR NEW WELLS NOW ASSESSED.		
				Number of wells paying revenue.	Jama per annum on wells.	Grazing assessment classed as fluctuating.	New wells not yet assessed.	Number of wells.	Rate at which assessed.	Jama per annum.	Number of new wells assessed.	Rate at which assessed.	Jama per annum.
S H O R K O T.	Bar ...	1879-80...	16	419	7,109	...	33	31	different.	411	16	different.	210
	Kachi ...	1879-80...	44	927	15,723	...	87	87	...	1,281	43	...	516
	Total...		60	1,346	22,832	...	120	118	...	1,692	59	...	726
	Bar ...	1880-81...	16	404	6,908	...	17	20	...	313	23	...	322
	Kachi ...	1880-81...	44	893	14,958	...	44	29	...	425	58	...	776
	Total...		60	1,287	21,866	...	61	49	...	738	81	...	1,098
	Bar ...	1881-82...	16	407	6,917	...	43	15	...	242	32	...	434
	Kachi ...	1881-82...	44	912	15,309	633	89	23	...	390	84	...	1,082
	Total...		60	1,319	22,226	633	132	38	...	632	116	...	1,516
	Bar ...	1882-83...	16	424	7,109	...	54	17	...	226	40	...	539
	Kachi ...	1882-83...	44	973	15,999	635	127	32	...	511	89	...	1,131
	Total...		60	1,397	23,108	635	181	49	...	737	129	...	1,670
	Bar ...	1883-84...	16	447	7,422	...	45	17	...	277	19	...	228
	Kachi ...	1883-84...	44	1,030	16,619	631	134	45	...	633	75	...	938
	Total...		60	1,477	24,041	631	179	62	...	910	94	...	1,166
	Total for the	1879-80...	60	1,346	22,832	...	120	118	...	1,692	59	...	726
	Tahsil.	1880-81...	60	1,287	21,866	...	61	49	...	738	81	...	1,098
		1881-82...	60	1,319	22,226	633	132	38	...	632	116	...	1,516
		1882-83...	60	1,397	23,108	635	181	49	...	737	129	...	1,670
		1883-84...	60	1,477	24,041	631	179	62	...	910	94	...	1,166
	Total for the	1879-80...	102	2,045	34,623	...	166	176	...	2,494	70	...	861
	District.	1880-81...	103	1,943	33,073	...	96	62	...	968	120	...	1,592
		1881-82...	103	2,001	33,697	893	174	48	...	826	178	...	2,293
		1882-83...	103	2,132	35,149	894	243	65	...	954	182	...	2,352
		1883-84...	103	2,249	36,547	890	262	79	...	1,134	127	...	1,578

REVENUE ON WELLS IN THE JHANG DISTRICT.

15	16	17	18	19	20	21	22	23	24	25
TOTAL ASSESSMENT NOW REPORTED.				DEDUCTION ON ACCOUNT OF		Net khalsa fluctuating revenue.	KHALSA DEMAND FOR EACH HARVEST OF THE YEAR UNDER REPORT.		Number of new wells at work, whose period of protection last not expired, and which, therefore, are not assessed.	Average annual fluctuating assessment on wells since the system was introduced, including assigned revenue, but excluding grazing assessment, and including the assessment of the year under report.
Number of wells paying revenue. columns 5 and 12, minus column 9.	Jama assessed on wells per annum, columns 6 and 14, minus column 11.	Grazing assessment classed as fluctuating revenue.	Total fluctuating assessment of the year.	Jagir, mafi and inams.	Zaildari.		Kharif.	Rabi.		
404	6,908	...	6,908	...	69	6,839	...	4,605	17	6,908
883	14,958	...	14,958	474	145	14,339	...	9,656	44	14,958
1,287	21,866	...	21,866	474	214	21,178	...	14,261	61	21,866
407	6,917	...	6,917	25	69	6,823	2,250	4,594	43	6,913
912	15,309	633	15,942	580	154	15,208	5,021	10,237	89	15,133
1,319	22,226	633	22,859	605	223	22,031	7,271	14,831	132	22,046
424	7,109	...	7,109	25	71	7,013	2,321	4,722	54	6,978
973	16,001	633	16,634	522	162	15,950	5,296	10,743	127	15,422
1,397	23,110	633	23,743	547	233	22,963	7,617	15,465	181	22,400
447	7,422	...	7,422	25	74	7,323	2,390	4,880	45	7,089
1,030	16,619	631	17,250	560	167	16,523	5,439	11,015	132	15,721
1,477	24,041	631	24,672	585	241	23,846	7,829	15,895	177	22,810
449	7,373	...	7,373	25	78	7,275	2,423	...	57	7,146
1,060	16,924	617	17,541	578	170	16,793	5,597	...	107	15,962
1,509	24,297	617	24,914	603	243	24,068	8,020	...	164	23,108
1,287	21,866	...	21,866	474	214	21,178	...	14,261	61	21,866
1,319	22,226	633	22,859	605	223	22,031	7,271	14,831	132	22,046
1,397	23,110	633	23,743	547	233	22,963	7,617	15,465	181	22,400
1,477	24,041	631	24,672	585	241	23,846	7,829	15,895	177	22,810
1,509	24,297	617	24,914	603	243	24,068	8,020	...	164	23,108
1,939	32,993	...	32,993	794	322	31,877	...	21,466	96	32,993
2,001	33,697	893	34,590	1,244	334	33,012	10,886	22,232	174	33,345
2,132	35,154	892	36,046	1,182	356	34,508	11,431	23,247	243	33,948
2,215	36,547	890	37,437	1,001	363	36,073	11,837	24,043	260	34,597
2,297	36,991	876	37,867	1,052	369	36,446	12,143	...	236	35,076

ABSTRACT STATEMENT OF THE FLUCTUATING ASSESSMENT

1	2	3	4	5	6
Tahsil.	Assessment Circle.	Year.	Total area under fluctuating assessment.	Abiana assessed at settlement not since remitted.	Area under fluctuating assessment cultivated during the year.
Jhang	Hethár-Chenáb ...	1879-80 ...	3,171	...	413
		1880-81 ...	3,223	251	830
		1881-82 ...	7,044	314	808
		1882-83 ...	7,044	319	1,867
		1883-84 ...	7,044	308	791
Chiniot	Halkewah	1879-80 ...	3,493	...	53
		1880-81 ...	3,493	40	34
		1881-82 ...	3,493	40	1,26
		1882-83 ...	3,493	40	1,26
		1883-84 ...	3,493	40	54
Shorkot	Hethár-Chenáb ...	1881-82 ...	8,516	368	1,70
		1882-83 ...	8,516	368	2,21
		1883-84 ...	8,516	328	1,63
	Total for the District ...	1879-80 ...	6,664	...	94
		1880-81 ...	6,716	291	1,11
		1881-82 ...	19,053	722	3,91
		1882-83 ...	19,053	727	4,81
		1883-84 ...	19,053	674	2,91

NT OF THE CHENAB VILLAGES OF THE JHANG DISTRICT.

7	8	9		10	11		12	
Rate applicable.	Resulting Jama.	TOTAL OF COLUMNS 5 AND 8.		Deductions on account of zaildari allowance.	INSTALMENT OF KHALSA REVENUE.		AVERAGE ASSESS- MENT OF FLUCTUAT- ING REVENUE SINCE THE SYSTEM CAME INTO FORCE, INCLU- SIVE OF THE YEAR UNDER REPORT.	
		Khalsa.	Jagir and Mafi.		Rabi.	Kharif.	Khalsa.	Jagir and mafi.
0-15-0	387	387	...	4	256	127	387	...
0-15-0	796	1,047	...	10	692	345	717	...
0 & 0-15-0	870	1,184	...	11	782	391	873	...
...	1,335	1,654	...	17	1,098	546	1,068	...
...	793	1,099	...	11	742	362	1,074	...
0-12-0	399	399	...	4	263	132	399	...
0-12-0	260	300	...	3	198	99	349	...
0-12-0	943	983	...	10	649	324	561	...
...	916	956	...	9	632	315	659	...
...	377	417	...	4	276	137	611	...
1- 2-0	1,987	2,310	45	23	1,525	762	2,310	45
...	2,581	2,904	45	29	1,917	958	2,607	45
...	1,835	2,118	45	21	1,398	699	2,444	45
erent.	786	786	...	8	519	259	786	...
...	1,056	1,347	...	13	890	444	1,066	...
...	3,800	4,477	45	44	2,956	1,477	3,744	45
...	4,832	5,514	45	55	3,647	1,819	4,570	45
...	3,005	3,634	45	36	2,416	1,198	4,319	45

ABSTRACT STATEMENT SHOWING THE FLUCTUATING SAILAB ASSESSMENT OF THE RAVI VILLAGES OF THE JHANG DISTRICT.

TAHSIL.	Assessment Circle.	AREA UNDER FLUCTUATING ASSESSMENT IN ACRES.												JAMA OF FLUCTUATING REVENUE.		Deductions on account of raildari allowance.		AVERAGE ASSESSMENT OF FLUCTUATING REVENUE SINCE THE SYSTEM CAME INTO KHALSA FORCE, INCLUSIVE OF THE YEAR UNDER REPORT.									
		UNCULTIVATED.	CULTIVATED FULL RATE.		CULTIVATED NOWABAD HALF-RATE.		Jhalir, 10 annas.	Jhalir, 1 Rupee 4 annas.	Sailab, 1 Rupee.	Jhalir, 1 Rupee 4 annas.	Sailab, 8 annas.	Jhalir, 10 annas.	Jhalir.	Khalas.	Jhalir.	Khalas.	Rabi.		Kharif.								
			Total.	Khalas.	Jagir.	Khalas.														Jagir.	Khalas.	Jagir.	Khalas.	Jagir.	Khalas.	Jagir.	Khalas.
Shorkote ...	Hethar, East.	1879-80	15,398	12,895	...	1,928	...	363	...	398	...	24	...	2,557	...	25	1689	843	2,557	...							
		1880-81	10,207	7,896	...	1,433	...	290	...	510	...	28	...	2,118	...	21	1,399	698	2,337	...							
		1881-82	10,018	7,648	...	1,529	...	160	...	673	...	18	...	2,065	...	20	1,364	681	2,247	...							
		1882-83	10,018	7,891	...	1,579	...	207	...	308	...	33	...	2,012	...	20	1,328	664	2,043	...							
		1883-84	10,018	7,924	...	1,775	...	94	...	218	...	7	...	2,006	...	20	1,324	662	2,036	...							

LIST OF ERRATA.

PAGE.	FOR					READ
3	Sajji	...	...	...	...	Sajjí.
4	„	...	...	...	...	„
5	Luxuriantly	...	...	...	...	Luxuriantly.
6	Any patch	...	...	...	...	A patch.
8	Sháh Jíwáná	...	...	...	...	Sháh Jíwana.
„	Kachchha	...	...	...	...	Kachcha.
9	Therely	...	...	...	...	Thereby.
13	That	...	...	...	...	Than.
20	Dalhergia S.	...	...	...	...	Dalbergia S.
21	Wán	...	...	...	...	Wan.
„	„	...	...	...	...	„
22	Khár jawán	...	...	...	...	Khár, jawán.
25	Drooping its leaves, stand	...	...	...	...	Drooping, its leaves stand.
27	Spotted tills	...	...	...	...	Spotted bills.
31	Hephæstus	...	...	...	...	Hephæstus.
32	Mankehra	...	...	...	...	Mankhera.
37	Rajhána	...	...	...	...	Rajbána.
„	It is in this reign	...	...	...	...	It was in &c.
41	Sháh Jíwanailaka	...	...	...	...	Sháh Jíwana iláka.
42	Siddha Dolowana	...	...	...	...	Siddha, Dolowana.
48	Keárná	...	...	...	...	Keráná.
65	Casual	...	...	...	...	Causal.

LIST OF ERRATA.—*Concluded.*

PAGE.	FOR	READ
66	Mustajir	Mustajir.
68	Became	Become.
77	Thursday	Tuesday.
85	Sowánk	Swánk.
91	Of seed is used	Of seed are used.
„	From jhallárs <i>or</i> the inundation...	From jhallárs on the inundation
92	Or $\frac{1}{2}$ lb an acre	Or $7\frac{1}{2}$ lbs an acre.
95	Wooly	Woolly.
97	The lands is first	The land is.
98	Melons shown	Melons grown.
102	Assessenant	Assessment.
115	Para. 148—included in the Jhang Settlement.	Included in the Jhang District
118	Para. 153—between the Jhelam from the Massan Taluka.	Between the Jhelam and Cher from the Massan Taluka.
136	Corrollaries	Corollaries.
140	Orginally	Originally.
143	Some of those wells	Some of these wells.
148	It would also	I would also.
154	Rates of yield for turnips Jhang 12-2-0.	12-0-0
„	2nd and 2nd class	2nd and 3rd class.
182	Girdawári	Girdáwarí.
„	Instalments	Instalments.

Proceedings of the Hon'ble the Lieutenant-Governor of the Punjab in the Revenue and Agriculture Department,—No. 142, dated 17th July 1885.

READ—

The Final Report on the Revised Settlement of the Jhang District, submitted by Mr. E. B. Steedman, and forwarded by the Financial Commissioner under cover of the letter of his Senior Secretary, No. 1150, dated 8th October 1884.

REMARKS.—The Jhang District is bounded on the west by Dera Ismail Khan, on the north by Shahpur and Gujranwála, on the east by Montgomery, and on the south by Mooltan and Muzaffargarh. The natural conditions and position of the district are thus described by the late Commissioner of Settlements and Agriculture in his review :—

It is situate in the centre of the great alluvial tract enclosed by the Indus and the Sutlej, and has an area of 6007·43 square miles, of which little more than a tenth, or 627 square miles, is cultivated. The rainfall averages only 11 inches per annum ; and the cultivation is consequently confined to the lands in the immediate vicinity of the Chenab and Jhelum. The former river traverses the district from north to south, and the Jhelum joins the Chenab near the centre of the district. Of the whole cultivation about a fourth depends on the river floods (*sailáb*), and the rest is irrigated by wells, of which the depth varies from 15 to 40 feet according to their distance from the river. The nine-tenths of the district not cultivated is a vast grazing tract, supporting in years of average rainfall large numbers of horned cattle. The population of the last census is 395,666 souls, or 631 to the square mile cultivated and 66 to the square mile of total area. About four-fifths of the population are Muhammadans, and nearly all the rest Hindús. There are few Sikhs. The population now is half as large again as it was reported to be 30 years ago, and in the return of 1881 above quoted is some 48,000 souls in excess of that of 1868.

2. Internally the district is divided into three well defined tracts :—*First*, the Bár lands to the east and in the centre of the triangle formed by the junction of the two rivers ; *secondly*, the lower lying lands situated nearer to the rivers, or actually fringing their stream ; and *thirdly*, the Thal waste in the west. The soil of the central or Kerána Bár is said to be of superb quality near the hills ; that of the Sándal Bár produces good grass in the northern half : both Bár's are dotted with *jál* and *karíl* bushes, which in their season afford fruits that for the time being become the staple food of the people. The Thal consists of an alluvial soil which is of much the same nature as that of the Bár's,

but which is covered with dunes and drifts of sand. The low-lying tracts have been divided by the Settlement Officer in the present settlement into the following assessment circles :—

<i>Tract.</i>	<i>Assessment Circles.</i>
Between the Chenab and Sándal Bár	... { River or Hithár. Centre or Wasat.
Between the Chenab and Kerána Bár	... { River or Hithár. Halkiwáh.
Between the Jhelum and Kerána Bár	... { River or Hithár. Centre or Wasat.
Between the Jhelum and Jhelum Chenab and Thal	{ River or Hithár. ... { Upland or Kachi.

Whether in the Bár or lowland tracts, the soil steadily deteriorates from north to south ; and, as would be anticipated from its natural climatic conditions, the aspect of the country and its wells is liable to undergo great changes. The heat during summer is intense, and even causes the leaves to wither on certain trees. The Jhelum floods usually bring down rich deposits, while those of the Chenab are generally more sandy in their nature. Above the point of junction both rivers flow in well-defined beds. Below the Trimmu Ghát the united stream spreads widely from side to side of the river valley and forms a large number of islands in its course. For administrative purposes the district is divided from north to south into the three tahsils of Chiniot, Jhang and Shorkot.

3. Of the area cultivated, *viz.*, 329,527 acres, 3,480 only yield crops without the aid of natural or artificial irrigation, and even this area depends largely on surface drainage for its productiveness. The area flooded by the rivers is 98,748 acres, and that protected by wells 227,299 acres. The number of wells at work in the district at the time of the settlement was 11,018. The average area irrigated by a well varies from 15 acres in the uplands to 30 acres where the irrigation is assisted by the river floods, and the cost of a well from Rs. 250 to Rs. 450. The only means resorted to for raising water is the Persian wheel. A moderate rainfall is best for well and river lands, but the Thal and Bár cannot have too much rain. Of the area under cultivation nearly three-fourths is sown with spring crops and one-fourth with autumn crops. The principal crops of the district are wheat

(176,500 acres), turnips (26,500 acres), gram (13,700 acres), jowár (38,300 acres), and cotton, the most valuable of the autumn crops (28,300 acres). Turnips form an important crop for the support of the well cattle, and are generally grown on the best well lands. The average outturn of the various crops is estimated as follows :—

		<i>Well lands.</i>	<i>River flood lands.</i>
		Mds.	Mds.
Wheat	...	16	8
Turnips	...	12	...
Gram	...	...	10
Jowár	...	6½	...
Cotton	...	4	...

An interesting account of the system of cultivation, of the rotation of crops and of the manuring of land is given by the Settlement Officer in paragraphs 99—124 of the report.

4. In a district situated as Jhang is the number of cattle owned by the people is almost as important a factor in estimating their welfare as is the area under cultivation. The Settlement Officer is of opinion that the number of cows and buffaloes in the district is about 150,000, the number of sheep and goats about 270,000, and the number of camels 20,000. According to the enumeration of stock taken last year and published in the statements annexed to the Land Revenue Administration Report of 1883-84, the number of bullocks, cows and buffaloes was 184,000, and the number of goats and sheep 342,000, but the number of camels only 13,000. The decrease in camels is probably only nominal, as the Lieutenant-Governor has been informed lately that the losses caused by the campaigns of 1879 and 1880 have been more than made good in the Jhang District. The Settlement Officer has not noticed at any length the wealth of the people in cattle, or the effect of this upon their habits. The facts contained in paragraph 79 of the report are, however, curious and significant.

5. The chief proprietary tribes of the district are the Syals, who own 79,000 acres of cultivation, the Játs who hold a similar area, and the Syads, Belochís, Hindús and miscellaneous Muhammadans, who own respectively 24,000, 41,000, 39,000 and 23,000 acres. The Játs are the best cultivators of the district. Syads are bad managers and worse husbandmen, and the Syals as a rule affect to

despise agriculture. Sixty per cent. of the area under crops is cultivated by Játs (41 per cent.) and Syals (19 per cent.). A full account of the location of the tribes and of the rural annals of the district is given by Mr. Steedman in paragraphs 27-28 of his report, and need not be repeated here. The country was for some time under the rule of the Syals, of whom Walidád Khán (d. 1747 A.D.) and Ináyat-ulla Khán (d. 1787 A.D.) were the principal chiefs. Early in the present century it was brought under the control of Mahárája Ranjít Singh, and from 1832—48 formed part of the Government of Diwán Sáwan Mal and his son Diwán Múl Ráj. Among the Syads those of Rajoa and Uch are of most note. Under arrangements made at the present settlement the former enjoy a small allowance of one-fifth of the assessment of Rajoa, aggregating Rs. 322 per annum. The Syals are divided into a large number of families, whose cognomen almost invariably ends in "áná." The Belochs have never attained any importance in the Jhang District. Of the estates of the district one-third are classed as of the landlord type and two-thirds as of the communal type. The average area per owner is large, being 44 acres throughout the district; the cultivated area per owner is, however, only $9\frac{1}{2}$ acres. Of the area cultivated 51 per cent. is in the hands of tenants-at-will and 45 per cent. in the hands of owners; occupancy tenants and the class known as *taraddadkárs* hold 2 per cent. each.

6. It was natural in a district situated as Jhang is that the first settlers should have been graziers, and that the present state of society should have grown gradually out of a nomad condition. It was also natural that in a tract where the rainfall is too scanty to allow of cultivation, and water is difficult to procure away from the rivers, the settlements of the people should have taken the form of detached wells rather than of a number of dwellings collected upon a single site. Until the advent of the British administration the rights of cultivators over the lands adjoining their settlements were exceedingly ill-defined, and as a rule property was strictly confined to the area cultivated by each person and to a reasonable amount of waste surrounding it. In this state of things it was the rights of the *hathrákaidárs*, and the tenure of the *taraddadkár* grew up. The former arose from the extortion of rulers, which drove cultivators to make over to influential men the proprietary share of the produce

of their land, retaining only a small fee in recognition of their own rights. The rights thus arose from agreement between the original proprietor and the person under whose protection he placed himself, and the title acquired by the latter to the share of the produce has gradually become hereditary and transferable. The tenure of the *taraddadkár*, on the other hand, had its origin partly in the power asserted to themselves by the Governors of the country to locate cultivators on any land which the owner was unable to bring under the plough, a small payment by way of compensation being made to the latter, and partly in the natural difficulty of obtaining tenants, which compelled proprietors to grant better terms than usual to the cultivators. Thus it often happened that it was to the advantage of an owner to make over a well to a tenant on condition of the latter paying half the proprietary share to him and retaining the other half out of which he had to make good half of the Government revenue, and in this way the tenure of the *taraddadkárs* became established. The total area cultivated by this class is stated to be 7,191 acres, an area slightly in excess of that held by occupancy tenants in the district. The formation of revenue-paying estates was unknown previous to 1848. The Settlement Officer explains in paragraph 86 of his report how they were created at the regular settlement, and it is easy to see from their origin why the present tenure is described as *bhyachára chahwár*, which is defined as follows by Mr. Steedman :—

In the occupied lands, wells and *sailáb*, possession is the measure of right. The unattached waste is generally village common held it may be on Khewat shares where the joint right of each Khewatdár is measured by the share of the village assessment paid by him ; or individual right is represented by the fraction of the total area of the village held ; or on ancestral shares by the descendants of the original founder or founders of the village to the exclusion of the other proprietors.

7. The large area held by tenants and the peculiar circumstances of the district which make them in great demand result, as would be expected, in exceptionally full data of rental statistics. Rent in Jhang is paid almost invariably in kind, the average rate for the whole district being .46 of the produce, and a rent of half of the produce being paid on 163,500 acres out of the total area of 216,000 held by tenants paying rents in kind. This rate is unusually high for an all round average, but in practice the rent is subject to con-

siderable drawbacks, and the portion of the produce which reaches the hands of the owner is generally speaking not more than one-third. In the first place, the tenant can cut as much wheat and jowár as he likes for the well bullocks, and he takes the whole of the turnip crop for his animals. In the next place substantial deductions are made for the wages of the reaper and the fees of the village menials. And lastly the tenant takes advantage of his position to extort other allowances. The result of all this is that, as shown in paragraph 204 of the report, the actual share of the produce which the landlord obtains varies from 29 to 36 per cent. only. Moreover, as the landlord is commonly obliged to make advances to his tenants in order to enable them to commence cultivation, and these advances are in many instances not recovered in full, his net receipts are often considerably less than the above, especially in the lowlands which the tenant usually deserts as soon as a cycle of bad seasons sets in. At the time of the settlement it was found that the advances made by landlords to their tenants amounted to Rs. 1,11,866, being an average of nearly Rs. 28 per tenant. One-half of the area held by tenants-at-will is in the hands of Játs, one-sixth in the hands of village menials, and one-eighth in the hands of Syals. Many of the tenants are owners of land as well. The village menials are said to be the worst cultivators in the district.

8. The revenue realized by the Syal Chiefs is stated by the Settlement Officer to have been one-fourth of the produce. Under the administration of Diwán Sáwan Mal the same standard of assessment was nominally observed, but in reality there was no limit to the revenue demand. "The only persons," writes Mr. Steedman, "who were safe from special exactions were persons from whom nothing could be squeezed." The cultivator of the soil was looked upon as a mere tenant with certain limited rights, but, as he was always allowed to retain a sufficient share of the crop to enable him to live, and as he received assistance when he needed it, the system of Diwán Sáwan Mal was not on the whole unpopular, as was that of Rájá Guláb Singh, who for many years farmed the revenue of the north of the district. The first summary settlement was made by Mr. Cocks in 1847-48. The second was made by Major Hamilton, Mr. Monckton and Mr. Ouseley in 1851-53. The regular settlement was made by Mr. Monckton between 1853 and

1857 in the greater part of the district, and by Mr. Ouseley in the Kalowál tract. The south-west parganas known as Garh Mahárája and Ahmadpur were settled separately as part of the old Khángarh (Muzaffargarh) District. The result of the various settlements was as follows :—

	First Summary Settlement.	Second Summary Settlement.	Regular Settlement.
	Rs.	Rs.	Rs.
Main portion of Jhang District	2,72,738	2,23,092	2,05,389
Kálowal	...	...	33,476
Garh Mahárája and Ahmadpur	30,452	32,460	28,502
Total	3,03,190	2,55,552	2,67,367

Both the summary settlements broke down more or less completely owing partly to the unsuitability of the British revenue system to a country circumstanced as Jhang then was, but chiefly owing to the unprecedented fall in prices which took place after 1850. The assessments were fixed on the basis of a reduction of 15—20 per cent. from the average collections of the past, but the reduced demand fell very unevenly on the estates and wells. Four summary settlements, it should be noted, took place in the Garh Mahárája and Ahmadpur tracts, in which no regular settlement was made until the present settlement was effected by Mr. Steedman: the assessment of the fourth summary settlement is shown above as that of the regular settlement. Of the regular settlements an interesting account is given in paragraphs 156—159 of the present Report. Mr. Steedman is of opinion that the results have been eminently satisfactory and all that could be wished. A few temporary remissions of revenue and revisions of assessment have taken place: otherwise the work of the Settlement Officer has stood the test of time unusually well.

9. The progress made by the district since 1860 has been very great. The area under cultivation has increased from 253,003 to 329,527 acres, the area irrigated from 190,883 to 227,299 acres, and the number of wells from 8,710 to 11,018. The percentage of the above increases are respectively 30, 19 and 26, while the percentage of the increase in the number of yokes and population has been 35 and 27. The exact increase in the number of cattle owned

by the people cannot be stated, but it has no doubt been considerable. The rise in prices since last settlement has also been very considerable owing to the development of the export trade, but the precise increase is not recorded by the Settlement Officer. During the same period the selling price of land has increased from Rs. $8\frac{3}{4}$ to Rs. $37\frac{1}{2}$ per acre, and the mortgage value from Rs. $13\frac{1}{2}$ to Rs. $32\frac{3}{4}$. The people are gradually settling down to more regular habits of cultivation; cultivation is therefore improving year by year, and there is practically an unlimited supply of good land for cultivation provided irrigation can be made forthcoming. The district is still somewhat cut off from the outer world, and must remain so until the irrigation of the Bar lands can be undertaken by Government, but the river highways afford easy means of exportation for the surplus produce of the villagers. The weakest point in the district from a revenue point of view is the unsatisfactory character of a large portion of the landowners as cultivators. This has led to the sale of an area of 72,000 acres since the annexation of the Punjab, and to the burdening of 125,000 acres with mortgage debts, which amount to 11 lakhs of rupees, or three years of the Government revenue. In most villages according to the Settlement Officer the amount paid annually in interest on debts is at least equal to the Government revenue. The land is in consequence passing largely into the hands of Hindús, many of whom are giving up trading. The subject of the transfer of lands will be referred to again further on.

10. The operations of the present settlement are described by Mr. Steedman in Chapter VII of his Report. As cultivation throughout the district depends almost entirely on the means of irrigation, soil distinctions as such were disregarded. Rain lands were assessed at a uniform rate of 8 annas per acre. As noted above the rain land area is very small. Lands irrigated by the river floods alone were assessed at rates varying from 12 annas to 1 rupee per acre. The chief data used by the Settlement Officer in fixing these rates were the rates paid in adjoining districts, the rates of the regular settlement, and the revenue paid by villages of which the assets had not increased since last settlement. From the table given in paragraph 178 of the Report it will be seen that the rates adopted approximate those sanctioned in the neighbouring tracts with similar natural advantages. The Jhelum sailáb lands are the best in the

district; the Jhelum Chenab lands next best ; and the Chenab lands worst. In certain villages the sailáb lands have been placed under a system of fluctuating assessment, which will be noticed below. The treatment of well lands was a more difficult task, and in fixing their assessment the Settlement Officer relied chiefly on "the rates adopted at last settlement, the incidence of the regular settlement assessments per well and per acre, the rates used in adjoining districts, the varying qualities of the wells in the different tahsils, the increase in assets, the enhancement of assessment given by retaining the old rates or by imposing the rates that seemed adapted to the wells, and the rates per acre and per well paid in villages whose assets had remained stationary since last settlement." The rates adopted in the low-lying tracts for lands irrigated by wells alone and for lands irrigated by wells and the river floods vary from Re. 1-4 to Re. 1-6 per acre, the assessment per well varying from Rs. 24 to Rs. 34 ; those adopted in the uplands vary from 12 annas to Re. 1-6 per acre, and from Rs. 16 to Rs. 32 per well. The difference between the lowland and upland wells is fully explained in paragraph 183 of the report. These rates were very carefully examined by Mr. Lyall and Colonel Davies when the Revenue Rate Reports of the district were submitted, and there is no reason for thinking that they are not appropriate. Though apparently low in themselves, they yield a large assessment per well, and, considering the precarious nature of much of the cultivation of the district, and the increase of revenue taken, there are no grounds for holding that they are unduly lenient. The result of the application of these rates was a demand of Rs. 3,53,862 as compared with a half net assets estimate of Rs. 5,87,314 ; the great difference between these results is explained by Mr. Steedman in paragraph 204 of his report. The actual revenue assessed was Rs. 3,57,867, the increase taken being 34 per cent. on the revenue of the regular settlement and 26 per cent. on the existing demand. This increase was probably as much as it would have been wise to take under any circumstances, and, subject to the approval of the Government of India, the Lieutenant-Governor is pleased to sanction the recommendation of the Financial Commissioner that the settlement be sanctioned for a period of 20 years with effect from 1st December 1879 in the case of the Chiniot Tahsil, and from 1st June for the rest of the district. In view of the backward condition of the district and the pro-

bable development of canals and railways in the early future, it does not appear desirable to sanction the settlement for so long a period as 30 years.

11. From the following table it will be seen that the revenue rates adopted in the principal assessment circles at the present settlement do not differ greatly from those fixed at the regular settlement :—

CLASS OF CULTIVATION.	REVENUE RATES ADOPTED AT REGULAR SETTLEMENT.				REVENUE RATES ADOPTED AT REVISED SETTLEMENT.	
	<i>Kalowál.</i>		<i>Jhang.</i>		Lowlands.	Uplands.
	Lowlands.	Uplands.	Lowlands.	Uplands.		
Unirrigated ...	...	8 annas.	8 annas.	8 annas.	8 annas.	8 annas.
River flooded ...	Re. 1-4 to 1-8	...	Re. 1-0 to 1-6	...	Re. 0-12 to 1-0	...
<i>Well Irrigated.</i>						
By wells alone...	Re 1-8 to 1-12	Re. 1-12	} Re. 1-6 to 1-8	} Re 0-11 to 1-2	Re. 1-4 to 1-5	...
By wells and river floods.	Rs. 2-0 to 2-4	...			Re. 1-4 to 1-6	Re. 0-12 to 1-6

The incidence of the assessment per acre of cultivation was Rs. 1-3-2 in the main portion of the district at the regular settlement, and Re. 1-2-5 in the Kalawál tract. It is now Re. 1-1-5 per acre for the whole district, the highest incidence, viz., Re. 1-2-2 per acre, being in the Shorkot Tahsíl.

12. The cesses imposed at the present settlement are as follows :—The local rate, $8\frac{1}{3}$ rd per cent. ; the lambardári cess, 5 per cent. ; the road and school cess, 1 per cent. each ; the post cess, $\frac{1}{2}$ per cent. ; and the patwári cess, 5 per cent. These cesses are sanctioned by the Lieutenant-Governor. The zaildári cess of 1 per cent. forms a deduction from the revenue. The subject of cesses is not noticed by the Settlement Commissioner or Financial Commissioner in their reviews.

13. A fluctuating system of assessment was sanctioned for certain river-side estates and for the wells situated in the Bar and Kuchi circles of the Jhang and Shorkot Tahsils. The details of the former are fully explained in paragraph 207 of the report, and of the latter in paragraphs 188 and 230.

Both systems are simple to work. The latter forms a special feature in the Jhang settlement, and appears to the Lieutenant-Governor to be well suited to the circumstances of the country. So far there has been a slight decrease in revenue of the Ravi villages under a fluctuating assessment and a large increase in the revenue of the Chenab villages. The revenue in question is, however, small, being less than Rs. 7,000. The revenue of the upland villages placed under a fluctuating system has risen from Rs. 32,993 to Rs. 37,867. The two systems are now formally sanctioned by the Lieutenant-Governor. The District Officer is at full liberty to recommend the extension of either of them at any time to any estates which in his opinion require to be placed under such a system. The remarks made by Mr. Steedman in paragraph 177 regarding lands subject to the river floods should be carefully borne in mind by the Deputy Commissioner, and suspensions of the revenue payable on such lands should be freely granted in bad years.

14. The distribution of the revenue over the wells of the district appears to have been very carefully directed by the Settlement Officer, and the results of this work doubtless correspond with the pains bestowed upon it. The revenue is paid almost entirely in proportions of one-third on the autumn harvest and two-thirds on the spring harvest. The dates now fixed for the instalments are 15th June, 15th July and 1st January, except in the Chiniot Tahsil, in which the revenue on account of the autumn harvest is payable half on 15th December and half on 15th January. The dates formerly in force for the spring harvest were 15th May and 15th June.

15. The Lieutenant-Governor observes with satisfaction that Colonel Wace is of opinion that the record of rights has been prepared very well. No reference is made in the reviews to the village note books. These have doubtless been completed with the same care as was bestowed by Mr. Steedman on the rest of his work, but the Lieutenant-Governor will be glad to learn that this is so, and that these records are being duly maintained by the District Officer. Where, as in the present case, delay occurs in obtaining the sanction of Government to a settlement, it would be convenient if the Financial Commissioner would obtain, and state in his review of the final report, the opinion which

the Deputy Commissioner and Commissioner of the Division have formed regarding the correctness of the record of rights. Sanction is hereby accorded to the record of rights prepared at the late settlement. No effort should be spared to keep the record up to date by means of the Patwári agency, which has been greatly strengthened by the Settlement Officer.

16. The Lieutenant-Governor approves of the remarks made by the Settlement Officer and the Commissioner of Settlements regarding the assessment of newly-formed riverain lands. The Deputy Commissioner should at once issue the necessary orders for the guidance of Tahsildárs in the performance of this part of their work, in accordance with paragraph 13 of Colonel Wace's review.

17. The account given in Chapter VIII of the date and saji assessment of the tirni system, and of the treatment of wells and catch-cultivation in the Bár tracts, is clear and interesting. His Honor will reserve his remarks on the tirni question until the report of the Financial Commissioner upon the whole subject is received by Government. The remarks of the Financial Commissioner in paragraph 12 of his review regarding the treatment of lessees of Government wells in the Bár are approved by the Lieutenant-Governor.

18. In paragraph 16 of his report the Settlement Officer has discussed the question of the development of canal irrigation in the riverain tracts. The Lieutenant-Governor agrees with the views expressed by Colonel Wace on this question in paragraph 3 of his review, and the Irrigation Department will be requested to depute an officer to examine the Chenab lowlands if possible next cold weather. The officer deputed might also report regarding the feasibility of opening the old Uch canal, to which Mr. Steedman refers in paragraph 40. His Honor does not doubt that under scientific direction the same results might be attained in Jhang as have been secured in Ferozepore, due allowance being made for the difference of natural facilities for the construction of inundation canals in the two districts, and he trusts that the Deputy Commissioner will turn his early attention to the subject. In this connection special attention is invited to a Resolution of this Government which is about to issue, forwarding for the information and guidance of officers Colonel Grey's District Canal Manual. Works of the nature above referred to, however, must not be under-

taken without the previous sanction of Government in each case. This is necessary everywhere, but it is more necessary where a system of fluctuating assessment exists than elsewhere. Where inundation canals are constructed in such tracts it may become desirable to alter the system of assessment; and where this is considered to be probable from the first, the consent of the villages concerned to the alteration of the system, as Government may see best, must be obtained before the commencement of the canals can be permitted. The Deputy Commissioner should also use his best efforts to induce the people to combine to open old channels and construct embankments for the purpose of directing the river floods, as indicated by the Settlement Officer in paragraph 177 of his report. Great success has attended efforts made in this direction in the Bannu and Dera Ismail Khan Districts, and there appears to be no reason for thinking that they will be less successful in Jhang.

19. The subject of the indebtedness of the Muhammadan agricultural population of the West Punjab, which is discussed by Mr. Steedman in paragraphs 167—169, has recently been before the Lieutenant-Governor in connection with an interesting paper by Mr. Thorburn, late Deputy Commissioner of the Dera Ismail Khan District. Sir Charles Aitchison has indicated his general views upon this question in referring the above paper for the opinion of selected officers, and it is not necessary that His Honor should do more on the present occasion than express his concurrence with the opinion of Colonel McMahon that legislation cannot arrest the action of natural causes, and that in all communities the extravagant and profligate must gradually disappear. It is clear from the facts stated by the Settlement Officer and Colonel Wace that the Government assessment of the land cannot be held to be in any measure one of the causes which are involving the land-owners of Jhang in debt. The Lekha Mukhi or running mortgage described in paragraph 89 of the report is doubtless a bad form of borrowing for the ignorant cultivator, but it would not seem possible for Government to interfere in such a matter between the money-lender and the cultivator with any real ultimate benefit to the latter.

20. The Lieutenant-Governor agrees with Colonel McMahon that the publication of a brief manual of the grasses of the Punjab would be very useful. Such a work

has been, or is about to be, published for the North-Western Provinces by Mr. Duthie, Superintendent of the Botanical Gardens, Sahāranpur, and, with the permission of the Government of the North-Western Provinces, it might be possible to arrange hereafter for the issue by Mr. Duthie of a similar manual for the Punjab. His Honor will be glad if the Financial Commissioner will make enquiries regarding this, and will report the result. An excellent collection of the grasses of the Hissar Division made by the late Officiating Commissioner, Mr. Coldstream, was recently submitted to Government by the Financial Commissioner, and has been returned to the Director of Settlements and Revenue Records. Sir Charles Aitchison agrees that it would be a great step gained if the people could be induced to encourage the growth of the better classes of grass. This point will be further noticed in dealing hereafter with the general question of fuel and fodder reserves in this Province.

21. The settlement lasted six years, and entailed an expenditure of Rs. 4,32,000 upon Government. The cost will be recovered in about six years from the increase of the revenue assessment. The duration of operations was in some measure due to the delay which occurred in communicating orders upon the Revenue Rate Reports submitted by the Settlement Officer. The circumstances of this delay, which led to the appointment of an additional Financial Commissioner in 1879, are known to the Government of India.

22. Sir Charles Aitchison cordially endorses the high praise which has been bestowed upon Mr. Steedman and his work by Colonel Wace and Colonel McMahon. The report submitted by Mr. Steedman is an excellent one in every respect, and gives a very clear idea of the district as a whole and its special circumstances from a revenue point of view. The Lieutenant-Governor is disposed to think that it might have been made a little shorter with advantage ; otherwise the report is a model which officers will do well to follow. His Honor is also happy to be able to record his acknowledgment of the services of Munshi Abdul Ghani, Extra Assistant Settlement Officer. The question of the reward for the Deputy Record-Keeper Uttam Chand should be referred separately for the orders of Government.

ORDER.—Ordered that the above Resolution be forwarded to the Government of India in the Department of Revenue and Agriculture with a recommendation that the settlement of the Jhang District be confirmed for 20 years from the date of its introduction.

Also that it be forwarded for information and guidance to the Financial Commissioner of the Punjab and for information to Mr. Steedman.

704 R.
No. ———, dated Simla, 14th October 1885.
167—2

From—E. C. BUCK, Esquire, C. S., Secy. to the Govt. of India, Rev. and Agril. Dept.,
To—The Offg. Secretary to Government, Punjab.

I AM directed to communicate the following remarks on the Settlement Report of the Jhang District, of which two copies were received with Mr. Fanshawe's letter No. 143, dated 17th July last.

2. The report contains many points of interest. The position of the district on the margin of the monsoon area renders it typical in many respects of the outlying districts of the Punjab. The attention, therefore, which the Settlement Officer has paid to the natural features of the tract, and the clear account given by him of its agricultural system and conditions, render his report of especial value as containing the most instructive description yet on record of the character and treatment of a class of country about which too few details have perhaps hitherto been generally available.

3. The increase of assessment—24 per cent.—is large, and, although His Honor the Lieutenant-Governor does not view it as other than moderate, the Governor-General in Council trusts that caution may be exercised in the earlier years of its application, and that the local authorities may receive instructions to relieve the district by timely suspensions, or even remissions, in the event of untoward seasons. On this understanding His Excellency in Council accepts the proposals of the Punjab Government, and sanctions the new assessments for a term of 20 years from the date of their introduction.

4. The average rain-fall of the year in Jhang is so small, barely exceeding 12 inches, that the district is, notwithstanding its normal exposure to drought, better protected against a failure of the monsoons than many tracts which expect a larger amount of rain. This is apparent from the fact to which His Honor has directed attention in the 3rd paragraph of his Resolution, that only about 3,500 out of nearly 350,000 acres—roughly only one per cent. of the whole area—is without irrigation, natural or artificial.

The description which is given of the district indicates, however, that over a considerable area of cultivated land the crops depend on inundation, and it is satisfactory to know that the system of elastic assessment is in these tracts receiving a very full and careful trial. The Government of India is glad also to observe that the desirability is recognised of substituting a fixed for a variable demand when a tract is rescued by works of improvement from the danger of an uncertain harvest. This scheme is entirely in accord with the principles advocated in the Resolution No. 58R., recorded on the 12th October 1882 by the Government of India, in which it was desired that tracts of uncertain harvest should in each district be mapped out and subjected, if thought expedient, to a more elastic assessment than tracts of greater security, but that at the same time every effort should be made by positive treatment to convert "insecure" into "secure" areas. The analysis, which His Excellency in Council desired to see made in every district, has apparently been to a great extent accomplished in the present case by the Settlement Officer.

5. There must, in a country like that under discussion, be a considerable deficiency of natural fodder in years of exceptionally scanty rain-fall. It is interesting, therefore, to observe that the agricultural community has resorted so fully to the employment of root crops as a means of sustaining the strength of the working cattle. The practice is one to which attention was drawn in connection with the Famine Commission's report, and it is doubtless capable of being extended more fully to other districts where the need for artificial means of feeding the plough cattle is less constant, and where, in consequence, less pains are taken to guard by irrigation and similar means against the effects of drought. At the same time, the district is one in which special attention should continue to be given to the preservation of those jungle reserves which, it appears from the evidence given in the report, supply food both to man and beast. The remarks of His Honor the Lieutenant-Governor to the effect that an analysis of the grasses of the Punjab would be desirable will be borne in mind, and steps will be taken to meet the wishes of the Punjab Government in this respect. The Superintendent of the Saháranpur Gardens has indeed already, under the advice of the Government of India and with the permission of His Honor the Lieutenant-Governor

of the North-Western Provinces, made a special investigation of the fodder grasses and bushes of the Government Cattle Farm in the Hissar District, the result of which will be communicated to the Punjab Government in due course.

6. His Excellency in Council has already noticed with gratification the very careful attention which Mr. Steedman has given to the details of the agricultural system of the district, and is pleased to endorse the commendation bestowed on that officer for the excellence of his report.

Endorsement by the Punjab Government.

No. 219, dated 4th November 1885.

COPY, with copy of Punjab Government's letter No. 143, dated 17th July 1885, forwarded to the Senior Secretary to the Financial Commissioner, Punjab, for information and for communication to Mr. Steedman.

2. The outline of the district is given above, but for a clear perception

Physical formation.

of the inner physical and geographical features, it is necessary to next fill in the course of the two rivers, the Chenáb and the Jhelam. The Chenáb enters the district a little west of the bi-section point of the base line, and after receiving the waters of the Jhelam leaves the district about 12 miles east of the district apex. The course of the Chenáb is steadily to the south-west, and the river consequently divides the district into two very nearly equal portions. The Jhelam enters the district at a point about 56 miles distant, and very nearly due west from where the Chenáb first touches the Jhang border. This river flows in a course nearly due south, and is absorbed into the Chenáb 40 miles below where it leaves the Sháh-púr district. The tract between the two rivers is a lesser triangle within the greater of the district boundary. Physically the formation of the district is that of an old alluvial flat, the remains of which are found in the high plateaux of the Sándal Bár, the Keráná Bár, and the Thal, traversed by the river valleys of the Chenáb and the Jhelam. The Sándal Bár is situate to the east of the Chenáb, the Keráná Bár between the Chenáb and the Jhelam, and the Thal west of the Jhelam. Between the Bár and the Thal uplands and the lowlands or Hethár annually flooded by the rivers, there is an intermediate tract called the Utár, and there can be little doubt but that all three represent different ages of geological formation. The Bár and Thal are the oldest formations, and are of distinctly alluvial origin. These tracts are probably identical, and geologically synchronous with the great plain of the Punjab made up of the various Doábs, each consisting of an elevated tract sloping down to the river valleys on either side.

3. In the northern portion of the district, the Sándal Bár rises abruptly

The Sándal Bár.

from the Utár, and the summit of the dividing ledge is from 10 to 30 feet above the plain below. From the Gújránwála border to the village of Pabbarwála, the ledge (Nukka, Dhaya, Dáh) runs near and parallel to the river and forms the boundary between the lands included in villages and the Government waste. South of Pabbarwála the ledge runs at some distance from the river into the Government waste, and does not any longer form a *quasi* boundary between private property and that of the State. As one travels south, the bank imperceptibly disappears, until at length it is impossible to say where the Bár ends or where begins. There is, however, a gradual rise in the country from the river to the Bár, evidenced by the increasing depth to water as the river recedes, and also by the direction of the surface drainage. The whole of the vast extent of country included within this Bár is, with a few trifling exceptions, the property of Government. The private rights that are now enjoyed by the sinkers of wells on leases from Government, will be separately noticed. There are no village estates in this tract. The only cultivation that exists, is attached to wells that are held under lease from Government, or, in a year of good rainfall, patches of rain cultivation will be found scattered sparsely here and there. With the wells only has this Settlement been concerned, and consequently having no direct call to visit the interior of the Bár, I only found time to ride once rapidly through it in the autumn of 1879. In point of soil the northern portion of the Bár is generally good. There is a marked and obvious deterioration to the south. The most

general distinction between good and bad land is that between sweet and sour. No grass grows kindly on kallar, and practically the quality of the Bár soil depends solely upon its power of producing pasturage. Among the sweet soils it is noticeable that a good loam with a slight sprinkling of sand on the top, as is often seen in the Bár, makes the best grass land. The reason is at once apparent. When the first summer rains fall, the ground has been parched and burnt by the heats of May and June into the consistency of iron. Last year's grass has been grazed down to the roots, and the surface is almost perfectly bare. Besides the natural power of absorbence possessed by the soil, there is nothing to prevent the rain as it falls, from draining away into the nearest depression. Where the soil is sandy and friable, the rain sinks where it falls, but on clayey lands it does not penetrate far into the soil, and is either carried away by surface drainage or evaporated by a burning sun. Not only is the soil poorer and kallar plains more frequent in the southern portion of the Bár, but even the better class of grasses, such as Dháman, are hardly ever found. Chembar is about the only good grass that can be got to grow on kallar. The other natural productions of the Bar are the pílu, the jand, the phog and the karíl, with here and there a few faráshes growing where surface drainage collects and various salsolaceous plants. The khár lání, from which sujji is made, is rarely found north of the road from Jhang to Gapní. There are a few small hills near and between SÁNGla and Sháhkot in the north of the Bár.

4. The Keráná Bár, a portion of the Jetch Doáb, takes its name from the Keráná hills found here. These hills are not, as generally supposed, and as stated by Mr. Monckton, outliers of the Salt Range. The following description is taken from Medlicott and Blandford's Manual of Geology : "Far to the north west of the Hissár country some hills occur on both sides of the Chenáb at Chiniot and Keráná. These hills are only 40 miles distant from the Salt Range, but the rocks are totally different from any that occur there, and correspond well with the character of the transition rocks of the Arvali series. They consist of strong quartzites with associated clay slates, forming steep ridges, with a north-east to south-west strike. The highest summit is stated by Doctor Fleming to be 957 feet above the plain." "The oldest rocks of the Salt Range are probably very much younger than the strata of Keráná." The rocks at Sháhkot and SÁNGla belong to the same formation as the Keráná hills. Just above Chiniot the Chenáb runs most picturesquely through a couple of gorges in these hills.

The lands of the Keráná Bár to the south and east of the hills are of superb quality. After slight showers of rain, the whole country is carpeted with grass. Better rain crops are grown here than in the Sándal Bár. To the west of Keráná and westwards, until the villages near the Jhelam are reached, the Bár soil deteriorates, and more and more kallar is found. The Keráná Bár is demarcated from the Utár by the same fall or slope as the Sándal Bár. Generally this ledge forms the boundary between the villages and the Government waste. But few villages possess lands beyond the high bank, or Nukka,

as it is called. The flora of this Bár is much the same as that of the Sándal Sujjí is produced to the south-west of Keráná. Some peculiar grasses grow on and near the hills, that are held to be of most excellent quality.

5. The strip of Thal attached to this District is of inconsiderable area,—246,554 acres. To the north the strip is exceedingly narrow, but it widens out considerably to the

The Thal.

south of the Jhang and Dera Ismail Khán road. The Thal apparently is a high plateau similar to the Bár, with this difference, that it is more or less completely covered with hills and dunes of blown sand. The soil below the sand is good enough, but it only crops out here and there. I have seen some interesting sections of the Thal both to the west in the northern portion of the Bhakkar tahsil, and to the east in this district, that have been exposed by the erosive action of the Indus and Jhelam rivers. It has always been to me a curious problem—the origin of this Thal sand. If there were any continuous stretches of sand hills on the left bank of the Jhelam, the question might be more easily understood, but there are not. I only know of one small portion of the Vichand Bár where there are sand dunes, and this is due east of Kadirpur Baksha. To the east of the Chenáb, below its junction with the Jhelam, there are no doubt sand hills here and there, such as are met with east of Gilmála, in Pirwála and elsewhere, but otherwise the tract in no way resembles the Thal. The sand hills of Gilmála and Pirwála too have most probably been formed from sand deposited in an old bed of the Chenáb that is found near. The remarks at pp. 436-439 of the Manual of Indian Geology, should be consulted for a further insight into the formation of deserts, such as those found in Sind and Rájputáná, which do not apparently differ much from the Thal, except that there the direction of the parallel lines of sand hills is north-east and south-west, while, according to the Sháhpúr Settlement Report, p. 11, they here run north-west and south-east. Native traditions attribute the presence of the sand to the action of the strong south wind that prevails during the greater part of the year, in blowing up the sand of the Indus bed. The authors of the Manual write of the Rajputana desert,—“It appears difficult to believe that all the sand found in the desert can have been derived from the Indus.” The same difficulty occurs in respect of the Thal sand. “The most probable theory appears to be that the Ran of Cutch, and the lower portion of the Indus valley, have been occupied by the sea in post-tertiary times, and that the sand of the desert was derived from the shore. The most sandy tracts, as has also been shown, are on the edge of the Indus valley * * * and these portions of the country were all probably situated on the coast.” “It is probable that the central portion of the desert was land, whilst the Indus valley, the Ran (of Cutch), and the Lúni valley were occupied by sea.” “The accumulation of sand in a desert region is evidently due to the low rainfall and the consequent absence of streams, the effect being intensified by the accumulation of sand and the porous nature of the resulting surface. In other parts of India, the sand blown from the river channels or the sea coast is either driven by the wind into other river channels, or is swept into them again by rain.” It is easy to follow these remarks in connection with the presence of sand in the upland of the Sind Saugor Doáb, but what in the case of the Jhang district requires an explanation is the

comparative absence of sand in the two neighbouring Doábs between the Jhelam, Chenáb and Rávi rivers, in fact the comparative absence of sand between the Thal and the Bikánír desert on the east of the Sutlej. The alluvium of the Keráná and Sándal Bárs and that of the Sind Saugor Thal on which the sand dunes rest, are probably of the same age, though I speak with extreme diffidence, and if this is the case, why are there not the same accumulations of sand? Did the sands of the Bikánír desert and those of the Thal once join, and have the Punjab rivers since cut their way through them, the uplands of the Bár having been first deposited and subsequently cut through at a later period? Where the Jhelam enters the district it runs alongside, and is cutting away the high bank of the Thal. From thence due west as far as the Indus Kachí, there is nothing but the most sterile waste of monotonously parallel sand dunes. Cross the river, and with the exception of the few mounds of sand mentioned previously, a flat plain of stiffish soil, here and there lightening down to sandy loam, is traversed until the Chenáb is met. It seems possible to account for the absence of sand by the decreting action of the rivers on the hypothesis that the sand of the Bikánír desert and those of the Thal were in past ages continuous, and that the Jetch and Reehna Doábs, lying as they do at a lower level, were subsequently deposited by fluvial action that had first eroded and carried away the sands. This, however, gives a higher position in the geological era to the Sind Saugor Doáb than is allowed by the Indian geologists, and of course my suggestion is little else than a guess suggested by the levels, the lie of the country, and the identical character of the sand in the two deserts separated from each other by the Punjab portion of the Indus drainage system. In the Thal attached to the Jhang district there is little or no cultivation. The distance to water is so great as to render well farming much less profitable than in the portions of the Thal nearer to the Indus. The aspect of this tract is dreary in the extreme. Rolling sand hills, running in an almost uniform direction, alternating with hollows of fairly good soil, studded with pílú bushes, are the only features of a landscape, unsurpassed for its monotony. The one prevailing tint of the soil is a light reddish brown, which after rain becomes rufous. The only greenery is that of the pílú bushes and trees. There is no láná or lání. Here and there phog and karíl bushes are seen, but the distinctive feature of the Jhang Thal is the pílú. The effect of the Thal is one of unrelieved depression. The Bár has a directly contrary influence. Grass grows luxuriantly in the Thal after heavy rain, but I have never been fortunate enough to see it in this happy state.

6. The tracts intermediate between the uplands of the Bár and Thal and the lowlands (Hethár) of the river valleys are of considerable variety. This tract is the more interesting, in that it contains the villages that pay the land revenue of the district. The characteristics of the tracts intermediate between the Sándal Bár and the Chenáb, the Keráná Bár and the Chenáb, the Keráná Bár and the Jhelam, and the Thal and the Jhelam and Jhelam-Chenáb, are sufficiently strongly marked to render separate descriptions, if not necessary, at all events interesting.

The tracts between the Bárs and Thal and the rivers.

7. The tract between the Chenáb and the Sándal Bár extends from the borders of Gújránwála to the villages on the Rávi. Between the Sándal Bár and the Chenáb Hethár lands. It varies in width from four to sixteen miles, but the average distance from the river to the Government Bár is usually 8 miles. Signs of its fluvial formation are to be seen everywhere. As in the Bár, so in this tract, the gradual deterioration as one goes south, is distinct and obvious. From Gújránwála to the boundary of the Jhang tahsil, the difference is not so clearly marked, but thence southwards the inferior quality of the soil, the infrequency of good grass-land, the constant occurrence of kallar flats, at once strike the observer. There seems to have been a general conspiracy to speak ill of the district and its scenery in the first days of our rule. Mr. Cust writes of it twenty years ago as "a remarkable tract which few have visited and fewer still would care to revisit," * * * "a dead and dreary level" * * * "the wilds of the Bár." Mr. Monckton also wrote,—“The Jhang district may be described in general terms as a region destitute of living brooks and shady groves, and with the exception of the rivers Jhelam and Chenáb, and the fringes of cultivation on their banks, the country is a dry waterless tract, covered with a sparse jungle of bushy trees.” “The march from Khíva to within a mile of Jhang stands probably unrivalled in the world for its combination of the most disagreeable features a landscape is capable of affording.” I do not wish to contest Mr. Monckton’s somewhat hyperbolic description, but I venture to add that the first sixteen miles of road from Jhang to Shorkot are, if not more, at least equally hideous. Mr. Monckton also noted the superiority of the northern portion of this tract to the southern. Of the Chiniot villages towards the Bár he wrote,—“The soil here is in general very fertile, and after rain these villages present a green and cheerful aspect.” Of the Jhang tahsil, which then extended down to the Rávi,—“Above that (the river bank) is the hard sterile soil of the Bhángar, with a few wells scattered along the edge of the Bár.” The best way to describe this tract and its varying character is to take three sections from the river to the Bár, one for each tahsil. The starting point will be the bank of the Utár, beyond which the river floods have been never known to pass. In Chiniot, with an unimportant break here and there, this bank is bordered by a fringe of well cultivation that constitutes the prettiest and most fertile portion of the tahsil. Each well is bowered in a cluster of trees, generally kíkars and shishams. Near the bank the cultivation is almost continuous, and there is hardly any patch of waste. Passing onwards the wells open out, and the intervening patches of waste become more frequent. These wells too are good in quality, and some discretion has been exercised in selecting their sites. Beyond these wells comes a stretch of waste land, where the cattle of the village graze while at home. The soil varies. Depressions with a clayey bottom, uplands of light loam, sandy tracts, with here and there a sand-hill, and patches of kallar, continually alternate. Then come the wells of the villages beyond the riverain estates, and beyond them again are the villages lying under the Bár. The wells are scattered, and each is a small hamlet in itself. The only wells whose cultivated lands adjoin are, as a rule, round the village, if there is a village. The waste between the wells is of good quality, and produces, with the assistance of wonderfully little rain, first-rate crops of grass. Next come the villages under-

the Bár. Here the distance to water is great, and without rain, or the assistance of surface drainage, they do but poorly. Consequently the wells are found in lines parallel with the bank of the Bár, and the zemindars use every contrivance to conduct on to these lands the silt-charged water that rushes down from the Bár uplands after rain. The aspect of this country and its wells is, as may be easily supposed, subject to the greatest changes. In seasons of good rainfall, no wells or tracts look so bright and smiling. In seasons of drought, a more desolate country and wells more poverty-stricken in appearance, cannot well be imagined. The areas of the wells are lying untillied, parched, and hardened by a relentless sun. The surrounding waste lands afford not one blade of grass. Everything presents a dull brown scorched appearance. I speak from direct personal experience. The summer rainfall of 1878 was extremely favourable, but since the 1st September 1878 to the 24th June 1880, only 5·4 inches of rain in Jhang, 7·9 in Chiniot, and 6·8 in Shorkot, have fallen. In Jhang the fringe of well cultivation along the flood bank betrays by its many breaks and its irregularity in breadth, that the soil is not what it is in Chiniot. Nor are the wells in themselves so prosperous in look as those lying farther north. The farming is responsible for this. There is not any very great difference in the soil where the wells are placed. Where there are no wells, the Utár plain above the river lands generally consists of a kallar flat, its uniformity broken here and there by small mounds that have collected and are now forming round the stunted karíl or jand bushes. There is also a thick growth of láná or lání, or of both intermixed. The wells beyond are more scattered, as good land is scarce. No use is made of surface drainage. The wells and country are uninviting. There are few trees round the wells. There is but little grass in the waste. Láná is the only plant that really seems to enjoy the soil and climate. Khár is found in the south of the tahsil. It seems to be a plant somewhat capricious in its choice of locality. The upper part of Shorkot is very similar to the lower portion of Jhang. Kallar, láná, lání, and khár are more diffused, and good grass land is less common. Traces of river action are here more numerous. Depressions and tracts covered with sand dunes are met with more frequently. Trees there are none, except here and there, near some depression in which water collects during the rains. To the south the Chenáb widens out, and the Utár tract becomes very narrow, and the soil in parts reaches a climax of sourness. Between the Utár lands and the tract that is ordinarily flooded by the Chenáb, comes a strip of country peculiar to the southern half of Shorkot. It is evidently a recent river formation. The soil is light and sandy. Water is very near the surface, and, where not cultivated, the ground is covered with a dense growth of sar grass.

8. The country on the right bank of the Chenáb from the river to the high bank of the Bár, is very similar in character to that on the other side. Near the river there is the same band of well cultivation gradually widening out to the scattered wells, and large stretches of waste of the tract adjoining the Bár. The high bank of the Bár dies away a little distance east of the boundary between the Chiniot and the Jhang tahsils, opposite the village of Kot Mohla. To the portion of

the Utár lying between this ridge and the Chenáb, the description of the country cis-Chenáb may be unreservedly applied. Further west the aspect of the country, here called the Sháh Jíwáná taluka, changes. Speaking generally, the face of the country is either half concealed by a sparse growth of sar grass, or appears revealed in all the ugliness of a kallar plain. Mr. Monckton writes of this tract,—“Here the soil is singularly sterile: for miles one may ride over tracts impregnated with saltpetre, and producing only dirty coarse grass, unfit for any useful purpose.” The wells, as might be expected in a tract of this description, are found scattered here and there over the face of the country. There are a few well-to-do villages, but most are poor, badly farmed, and owned by extravagant thriftless Syuds. This inhospitable waste does not end until the Jhelam villages are reached. The lower part of the triangle, contained between the two rivers, is termed in common parlance the Vichand. Towards the apex of the triangle the country may be described as a dorsal ridge, covered with efflorescent saltpetre, between the fertile low-lying alluvial lands of the two rivers. This backbone of extra sour soil extends as far as Kádirpúr Baksha, and its continuity suffers but very few and very slight breaks. The country round Kot Isa Sháh, between the Jhelam and the tongue of Bár that runs down southwards, is probably the most fertile and most picturesque in the District. The soil is good, agriculture flourishes, and trees are abundant for some distance away from the river. Beyond comes another infertile tract, containing much kallar, and then the Bár is reached. Here there is no high ridge well defined. The expanse of kallar is broken in some parts by curiously fertile patches. Such an one is the village of Bhairo, bounded on the east by the Bár, and on the west by a kallar plain, that for extent and nakedness is, I think, unequalled.

9. The tract between the Thal and the Jhelam is called the Kachí.

Between the Thal and the Jhelam and Chenáb Hethár. Kachí is also the name of the alluvial lands of the Indus valley, as distinct from the Thal and Damán. The word means a country that is contained within some strongly marked boundary, here the Thal. It is distinct from and must not be confounded with the Urdú *kachehha*,—unripe, unformed. To the north the Jhelam is now flowing immediately under the Thal, and the higher portion of the Kachí, *i. e.* that out of reach of the Jhelam and Chenáb floods, does not start fairly until the village of Sherowána is reached. Thence, as far as the Muzaffargarh boundary, the tract of Kachí runs unbroken. This strip is, on an average, about nine miles broad. As is the case with the whole of the district, the soil gradually deteriorates to the south, and because worst on the Muzaffargarh border. Here the only cultivation to be found, except a well or two, lies immediately under the Thal Bank in a depression. The wells are of a fairly prosperous appearance. A little tall grass, and a good deal of sar, grows in and near the depression. Between the Thal and the river the country is almost desolate. Rolling sand dunes, on which a few scant patches of sar grass only thrive, flat plains of the hardest and most unfruitful clay, strips glistening with the salt efflorescence, and patches of black kallar, locally known as ‘bishí’—(poisonous), from its deadly effect on all vegetable life, alternate in dreary succession. Vegetation is represented by a few starved

karil bushes and lání plants. Northwards there is a decided improvement in the soil. Notably there is very much less kallar. Near the river the well cultivation is dense, the country is well wooded, and agriculture flourishes. Towards the Thal cultivation becomes sparser. The wells are found in lines, the direction being determined by the presence of some depression, into which the surface drainage of the country finds its way. The soil is more fertile and cooler than the higher-lying lands. The depression under the Thal here again is studded with wells. The soil is a good loam of a reddish tint. Near the river karil is the predominant scrub, while near the Thal the lání bushes are so numerous and so large as to form a stunted forest. The separate distribution of these two shrubs is very marked. Where the two zones meet they are found intermixed, but near the Thal hardly a karil and in the river villages hardly a pílí will be found. The absence of grass is the distinguishing feature of the Kachí. In the cold weather grass sufficient to feed half a dozen horses certainly could not be procured, and probably does not exist. The bareness of the surface is most remarkable. The soil is clayey. Water does not penetrate, but drains away into some depression, where again, when the water is evaporated, the salts left behind prevent the growth of any vegetation. There is very little uncultivated and anywhere in the Kachí that is free from the kallar taint.

10. Mr. Monckton in a few happy sentences gives a description of the The Upper Chenáb Chenáb that cannot be improved upon : "The Chenáb valley. is a broad shallow stream, with a sluggish current and a licentious course. Its deposits are sandy, but its flood is extensive, and from the loose texture of the soil on its banks the moisture penetrates far inland." The above description was made with reference to the upper Chenáb in Tahsil Chiniot. Of the lower Chenáb, Mr. Monckton wrote,—“The country on the banks of the Chenáb is generally low and moist. The river flood extends in many places as much as three and four miles inland at its highest rise.” The great difference in the character of the Chenáb above and below its junction with the Jhelum has, I think, never been thoroughly recognised. Above the Trimmú ferry the Chenáb is confined within well marked banks, over which its waters rarely, and only at a few known points, ever spill. The country between the two containing banks varies considerably in width. Where the river has cut away a larger slice of the Utár, the banks become necessarily farther apart. The width and depth of the river bed has naturally an important effect on the extent and height of the floods. Often do the zemindars complain that the bed ‘pet’ is far too big. Where the banks are near and the real bed of the river is not excessive in width, the greater portion of the lands between will be flooded annually. Where the distance from bank to bank is considerable and the river channel runs in a tortuous course through the centre, the action of the floods becomes uncertain. In places the *bela* land* between the river and the high bank is only naturally inundated when the set of the stream is directly towards it. When the course of the river is less favourable, the needful supply of flood water is obtained by throwing embankments across the nullahs by which such lands are invariably intersected, and thereby raising the water level. Instances of such nullahs are found in the Halkiwáh, and the channels flowing through

the villages of Murádwalla, Kurk, and Tahli Mangíní, Maghiána, Kharí Chund Bharwána Shekhán &c. The deposits of the upper Chenáb are usually very sandy. The zemindars have a saying that "it takes gold and silver and copper," *apropos* of the difference between the land carried away and the land thrown up. The upper Chenáb deposits require successive deposits of silt before they become fit for cultivation. I believe the inundations of the Chenáb to be fairly regular. I have observed them for four years. In 1875 the river remained lower all through the hot season than it had ever been known to do before. In 1878 it was in such flood as had never been seen since the Regular Settlement. In 1879 the floods were a little below the average. This year there is every prospect of a good Chenáb. Judging from the spring harvest crops of 1877, the inundations of 1876 must have been favourable. Mr. Cust's picture of "wells, villages and culturable area being carried away by a merciless torrent" is an exaggerated and unfavourable representation of the Chenáb. It does possess enormous powers of erosion, but, except under particular circumstances, it takes years to cut away a village.

11. From the point of junction with the Jhelam the breadth annually inundated begins to expand, until in the lower part of the lower Chenáb valley. tion of the Shorkot tahsil, near Ahmadpúr and Jallálpúr, the river spreads out almost in fan shape, and its water flows far inland. Large islands, *belas* or *bindis* as they are called, form more frequently than to the north. The largest is the *Dingí bela* opposite Ahmadpúr that has already a length of 8 miles, and exhibits signs of further growth to the south. The aspect of the *sailáb* lands adjoining the river is much the same on the lower and upper Chenáb. Along the bank is found a dense belt of dark *lai* (*Jái* or *pilchí*) jungle, often so thick and strong that a horse could with difficulty pass through. This is intersected by numerous channels of the river, dry during the greater portion of the cold weather, but filled with any slight rise in the river. There is but little cultivation, and what there is consists of patches of wheat, massar, peas or gram scattered here and there amongst the underwood. The soil is generally good and has been recently accreted. Still its quality varies greatly. In one place the accretion has taken place only lately, and more silt must be deposited before the soil can be termed good. In another spot the soil was formed long ago, but it is still little better than a sand bank covered with a thin layer of clay, sometimes hardly more than a mere film, and here and there the sand itself crops out. Beyond this strip of jungle and cultivation intermixed, and between it and the bank which bounds the inundations, come the cultivated lands of the alluvial tract. The soil varies from stiff clay to sand, but is generally a good light loam, easily-worked and retentive of moisture. Rabi crops are chiefly grown, only the higher and lighter soils being devoted to the production of autumn crops. Below Shorkot the bank of the Utár is either wanting or else is situate at some distance from the stream. Instead of finding a comparatively narrow strip of cultivation between the new deposits and the Utár bank one is at once struck by the absence of any high land beyond which no flood ever passes. The country is traversed by numerous channels that carry the flood water far inland. There are broad expanses of rich *sailáb* land near the river; but these do not extend far. Beyond, high-lying strips and patches

of waste land of a sandy texture, covered with a thick growth of sar grass, become common. The cultivated lands are found in between wherever there is a depression that is reached by the flood water. As the river recedes wells become more numerous. Near it there are but few. In February or March the view of this cis-Chenáb portion of the district from an old mound or eminence has a peaceful beauty peculiar to itself. A sea of yellow grass rippling in the breeze, edged on the west by a silver ribbon of river, are the features that first strike the eye. Dotted over the surface are dark clumps of trees round the wells, and here and there a few groves of date palms. Towards the river long stretches of green wheat are to be seen, while nearer in the cultivation is hidden from view or only peeps out near a well or where a piece of sailáb cultivation larger than usual is found. Beyond the river rise dark against the horizon the trees growing round villages that fringe the further bank. Trans-Chenáb from the junction of the rivers to Ahmadpúr, the sailáb lands are bounded by a high bank separating them from the Kachi tract described above. At Ahmadpúr the level of the country seems to sink, the bank to disappear, and the flood water of the river passing to the west of Ahmadpúr, finds its way by depressions and canals into the Kaudiwál lake (jhil) lying immediately under the high wall of the Thal.

12. The Jhelam has a course of about 45 miles in length from the point where it first touches the Jhang district down to its point of junction with the Chenáb, the Domel as it is called. As compared with the Chenáb, the Jhelam contains a much smaller volume of water, and flows in a much more confined channel. The area subject to inundation from the Jhelam is much less extensive, though in flood season the rise in the river must be considerably higher than that of the Chenáb. In his report Mr. Monckton notes that the Jhelam is subject to peculiarly high floods. Since I have been in the district, the river has generally remained rather low than otherwise. There was one remarkably high flood in November 1877, that destroyed a considerable portion of the kharif crop, but no other extraordinary rise in the river has taken place to my knowledge. The erosive action of the Jhelam is quite as powerful as that of the Chenáb, but its deposits are far richer in argillaceous matter. There is more mud and less sand. A deposit of Jhelam silt often bears a good crop of coarse rice the first year it is formed. The country on the banks of the Jhelam is fertile, well wooded, densely cultivated, and supports a larger population than any other portion of the district. There is hardly any waste land. The Jhelam being a narrow stream, islands (*belas* or *bindis*) are seldom met with.

13. The Rávi first touches the district at a point only 11 miles from where it falls into the Chenáb, but the length of its singularly tortuous course between these two points, must be nearly double that distance. Judging from the description of the Rávi given by Mr. Purser in the Montgomery Settlement Report, the character of the lower Rávi varies considerably from that of the upper. On the Jhang side of the river the Rávi sailáb lands are separated by a very high bank from the lands of the Utár. The outline of this bank is most irregular in its twists and turns, carved out as it has been by the action of this most erratic river.

Below this bank lies a considerable tract of bet of a very uneven surface in quality, and intersected by numerous old channels of the Rávi. These are called "Budh," or "Dand," and in the cold weather such of them as have not subsequently silted up and become dry, afford both water to the jhallárs and excellent duck shooting. At the end of one cold weather it is impossible to predict where the river will be at the beginning of the next, beyond that it will be below the Utár bank. Its course is the most capricious and inconstant of all the rivers of this district. Ordinarily it does not, like the Chenáb, flood the whole of the sailába lands. The extent and the locality of the floods depend solely upon the direction of the river. If it is flowing under the left bank the chances are that the lands under the right bank will not get a drop of flood water, except the lowest lying strips in the old channels of the river. The Rávi alluvial lands are composed of a stiff soil, very productive if it gets flood water, but hardly pervious, and but little benefited by percolation, except where it is unusually sandy. The stream runs in a deep bed. The lands of the three villages nearest the Chenáb differ. They suffer from too much water, as a rule, and prefer a low river and percolation. The proximity of the Chenáb is probably the main cause why percolation is so effective in these villages. The soil is, I think, certainly Rávi alluvium. The highland between the Rávi and the Chenáb is curiously similar to that between the Jhelam and Chenáb. The same bare unfruitful plain with a surface stratum of kallar efflorescence, is found. The presence of much coarse dab grass, a few patches of sar grass and some infrequent lai bushes, give the Shorkot Vichand a slightly more hospitable aspect. About two miles from the Rávi and close to the Multán border, a thick forest of jand is found. This forest, I believe, extends some way into the Multán district. Only a small portion is included in Jhang. The ground appears to be nothing but kallar of the rankest nature, yet the jand grows with a luxuriance I have never seen elsewhere. The site is apparently a depression, for not only does water flow down from the Utár and collect here, but sometimes the flood water of the Rávi spilling over the bank above Chichawatní, flows across some fifty miles of country and finds its way by here into the Chenáb. The greatest flood took place in 1875, and again in 1878, a little Rávi water, largely augmented by the drainage of the Bár, reached the Chenáb by the same route. The Rávi side does not present that appearance of fertility that characterises the Jhelam valley and the alluvial lands of the Chenáb. The upland wells are extremely poor, and there is much kallar. The Hethár lands betray the uncertainty of the supply of flood water.

14. Irrigation works of modern date in Jhang compare but unfavourably with the remains of those of the past. The only

Present canals.

canal now at work is one in Shorkot, called the Wakefield Wah. Its history is apparently this: In 1872 Niámat Rai devised a scheme for cutting a canal from Buddhawána to Manga Afghánán. Mr. Wakefield approved of the plan, and by 1874 a canal sixteen miles long had been excavated at their own cost by the zemindars of the villages through which it passed. The canal has not been doing so well during the last two or three years. This is due partly to a change in the Chenáb stream, but more so to lack of management. Annual clearances are effected under the super-

vision of the Tahsildar, but proper distribution of the water there is none. The villages near the head not only take more than their share, but allow the water to run waste in a scandalous manner. A set of rules were drawn up by Mr. Tolbort, but they have never been acted upon. The new assessment of Shorkot Khās has been pitched considerably above the old jama, almost solely in consideration of the improvement of the village since the opening of the canal, and I think fit to give warning here, as I have done in the village note book, that the failure of the canal must be followed by a reduction of jama in this and in other estates benefited by the canal.

There are a few other cuts from the river in various villages made to assist and guide the flow of the flood water inland, and they are welcome signs of the birth of some enterprise among the zemindars. These ditches are to be found at Basti Varyām and Jallalpūr, Kakkuwalla, Ahmedpūr, Sultan Bahú and Haveli Bahádarshah in Shorkot. In Jhang I know of only one, made by the Chelas of Wasú Astana, and another started by Mr. Wakefield near Jhang, that has never flowed since the first year. In Chiniot there are about the same number.

15. The old canals are three. In the Vichand the remains of an old canal of considerable size are to be seen. Local tradition says that it was a portion of the Ráníwáh canal that leaves the Jhelam in the Bhera tahsil of Shahpūr. Nothing is known as to when the canal was constructed. The story goes that it was the work of a rich banker of Bhera, whose daughter was married to a resident of one of the Jhang Vichand villages. The daughter, when she reached her husband's home, complained of the scanty supply of water, and her father at once cut the canal to put an end to her trouble. Another version is that the daughter vowed that she would not marry the man to whom she was betrothed, unless she could get to his house by water, without putting foot to the ground, so her father forthwith proceeded to excavate this canal. The remains of the canal opposite Kádírpūr Baksha are perhaps in the best state of preservation, and show that it was a work of some magnitude, and aligned considerably above the level of the country. In the Shorkot tahsil the banks of an old canal that left the Chenáb a short distance east of Mírak Syál, are still recognizable. The people have no tradition whatever as to its construction. The fact that the Chenáb must have been running at a very much higher level than now and in a very different bed before water could have been supplied to the canal, is the best evidence of its antiquity. The head of the canal takes off the old bed of the Chenáb lying between Mírak Syál and Káim Bharwána, into which now-a-days the water of the river in highest flood hardly penetrates. All vestiges of the canal are lost about a mile from the village of Shorkot. The third canal is that of Uch, constructed by Fakir Gul Imám. As the prosperity of Uch and its fakir depended so much upon this canal, I shall defer giving an account of its construction and irrigating powers until the old position of the Syuds of Uch is discussed. Moreover this canal is comparatively of modern date, and its history is well known. There is a wide interval between it and the two other canals. In the Revenue Survey maps of the Bár, certain narrow channels have been

marked as remains of an old canal. I have never seen them myself, but the zemindars talk about an old canal called the Nannanwá. I have never been able to elicit from them any information beyond the assertion that it must be the work of some king of old. The account of Sāngla, given by General Cunningham, may be consulted for further information.

16. The benefits conferred by small inundation canals in a district so circumstanced as Jhang, are simply inestimable, and there are many places on both the Jhelam and the Chenáb where canals might be successfully excavated.

Policy to be observed in future irrigation schemes.

To conduct the river water on to the Utár with the limited means and purse of the district officer will, as a rule, hardly be practicable; nor has the time yet come. What I advocate is a series of small canals carrying the flood water inland to the villages who sometimes get flooded and sometimes not, as the direction of the main stream and the height of the flood vary, and to the villages adjoining. Such irrigation works are specially suited to the portions of Shorkot and Jhang tahsils situate on the left bank of the Chenáb. From the Chiniot border to Jhang there is a considerable stretch of low-lying country traversed by old (now dry) branches of the Chenáb. It would cost very little money to clear out and deepen the heads of these nullahs, or to cut canals connecting them with the river so that they might fill in the inundation season and their water be utilised both by flow and jhallár to assist existing well cultivation. A walk round by the Karóra nullah, where it flows through the lands of Maghiána in the hot weather, will indicate how prized are jhallars as an aid to well cultivation. Down south the whole of the Hethár and the southern intermediate villages afford a splendid field for honest unpretentious work of this description. Jallálpúr is four miles distant from the river, yet water in moderately high floods finds its way along depressions down there, breaking away from the river at a point some ten miles or more to the north. Last year Jallálpúr and the villages round were as badly off as they well could be. There had been no rain, and the river floods, though by no means unfavourable on the whole, had just missed reaching. Now in the interests of the Government revenue, such chances as these ought, as far as human power goes, to be rendered impossible. The zemindars living in different villages, belonging to separate tribes, disunited by smouldering jealousies or blazing hatreds, without the reason to perceive that in such a matter their interests are identical, never have and never will coalesce for objects of this nature. This state is partly due to their natural apathy, and not a little to the system of revenue administration that preceded annexation. Sāwan Mal looked upon the agriculturist, there is no concealing the fact, as a being not able to take care of himself. He was nursed, looked after, and assisted in a manner that is no doubt most repugnant to the Anglo-Saxon feelings of independence. But whether our system, under which the zemindar is no longer the State's *protégé*, but a man abandoned to his own devices, and left to sink or swim at his own inclination, has been a successful one, is a very moot point. Bred up under the old *regime*, the zemindar cannot conceive why he should undertake such works. His fathers never did so. Such jobs in old times were left to the State, and so they ought to be now. As far as my own experience goes, any district officer who thought the experiment worth trying, would find the zemindars only too

glad and ready to co-operate with him in any project for ensuring to them a steady supply of flood water, but alone they will never do any thing. In the Vichand too, there are several villages that would be enormously benefited by the opening out of old channels of the river. When the low-lying villages have been rendered secure, it will be time enough to devise larger projects for conducting water on to the Utár. It may be objected that the scheme here outlined is too modest and insignificant, and to this I reply, that in a district such as Jhang, with a scanty population not at all fond of the laborious life of a ploughman, to suddenly open out to cultivation by means of canal water a large area hitherto totally uncultivated, can hardly fail to bring in its wake most disastrous consequences. My opinion is, that for many years to come, no canals whatever, except such as are intended to protect and extend existing cultivation carried on by existing cultivators, should be excavated. I expanded this opinion in a report called for in reference to a projected canal from Chiniot through the Bár. The density of population to the square mile in the districts marching with Jhang is,—in Dera Ismail Khán 55, Sháh-púr 78, Gújránwála 207, Montgomery 64, Multán 80, Muzaffargarh 78, while in Jhang itself the population is 60 to the square mile. In the districts of Lahore and Jhelam, which may also be said to lie near, the population per square mile is respectively 217 and 128. Can we, if a canal is made in the Bár, count upon any of these districts to send a contingent of cultivators? Have any of them a surplus agricultural population? With the exception of Gújránwála, I think the answer must be—No. In Dera Ismail Khán the existence of large tracts of culturable waste along the Indus and the probable carrying out of the Lúni Irrigation scheme, must operate to retain any excess population within the district boundaries. Sháh-púr has her own system of irrigation canals, that is being year by year extended. In Montgomery the agricultural class is not sufficient for the land, and when a new inundation canal is opened, it is to the deterioration and sometimes to the ruin of adjacent villages, which are drained of cultivators. Cf. Mr. Purser's Assessment Reports of Dipálpúr and Pákpattan, and the Final Settlement Report of the Montgomery district. In Multán and Muzaffargarh there are a large number of canals, and it is not likely that any of the agriculturists of either district would emigrate to a canal in the Jhang Bár. Even the southern portion of Gújránwála is sparsely populated. The density of the district population is raised to 207 per square mile by the thickly populated tract lying to the north of the district farthest away from Chiniot. The Jhang district is, as it is, badly off for cultivators, and those found are but little attached to their holdings. The construction of a canal in the Bár could have but one effect on such tenants. They would leave their old landlords at a moment's notice. There would be a general rush of tenants-at-will to the canal, accompanied by a corresponding decrease in the cultivated area and the number of wells at work in the settled villages. In such case it would be impossible to realise, and ruinous to demand, a revenue that was paid before with ease. The present Settlement would break down with a crash, and a re-settlement and a re-distribution of the assessment would be inevitable.

Is the canal needed? It rather seems that all the phenomena that go to make up an "urgent need for a canal" are wanting in this district. Canals are

needed primarily, I take it, for two purposes. 1st,—To ensure rain and other uncertain crops against seasons of insufficient rainfall ; 2nd, To afford an outlet for an over-abundant population, by enabling lands to be brought under cultivation that otherwise could not be profitably farmed or even farmed at all. In Jhang 69 per cent of the cultivated area is *chāhi* or protected by wells, and 30 per cent *sailāba* or naturally moist and needing but little rain to bring the crop to maturity. Only one per cent is rain cultivation. The first reason for a canal does not exist, and the second does not apply, either to this or any of the adjacent districts.

17. The climate of Jhang does not differ from that of the remainder of the southern Punjab. Mr. Blandford states that the climate. during June, July and August, the highest mean temperature prevailing in any part of India is that of the comparatively rainless tract about Multán, Montgomery and Dera Ismail Khán. The intensely hot weather commences shortly after the 1st June. The *kikar* and *bér* trees lose all their leaves in the burning heat. There is generally a fall of rain by the 15th July. A hot wind blows more or less steadily from the south and south-west during the month of June, until the advent of the monsoon current is felt, and then the winds are very variable. The nights are, if not cool, at least comfortable up to the last ten days of June, and then day and night are both equally intolerable. Jhang after general rain has a most pleasant climate. The thermometer falls, and there is little or none of that close muggy atmosphere that characterises the rains in stations with a larger rainfall and moist soil. Calms are rare. If the rain ceases, as it sometimes does, or if the breaks are long, the heat becomes again intense, and hot winds have been experienced in the latter part of July. There is always a change in August in this part of the Punjab. The nights and mornings get cooler. If there is no rain in August and September, this cooling proceeds very gradually until the cold weather commences, and punkahs are abandoned about the 10th October. With rain about the middle of September, the cold weather comes in much quicker. The cool bright days, the frosty nights, and the crisp fresh mornings of the cold weather of the Punjab proper, are to be found at Jhang as elsewhere. October and November are rainless. During the last week in December and in January and February rain usually falls. By the end of March the weather grows perceptibly warmer. April is hot and dry ; May is hotter and drier. The district is a particularly healthy one. There is ordinarily but little fever. Cholera seldom appears, and never badly. The drinking water at Jhang and generally along the banks of the Chenáb, is excellent. The average rainfall given in the Gazette is 12·7 inches for last 24 years. The tabular statement below gives the fall for last 12 years—1868-1879—at each Tahsil :—

Rain fall Statement of the Jhang district for 12 years commencing from 1868 to 1879,

YEARS.	JANU- ARY.		FEB- RUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		REMARKS.
	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	Inches.	Tenths.	
Pargana Chiniot.																											
1868	1	...	1	9	1	4	1	3	...	7	...	1	3	4	...	8	...	...	...	...	...	...	...	...	...	...	
1869	...	3	...	2	5	5	...	4	...	...	...	7	7	6	...	5	...	9	...	...	...	...	...	...	...	...	
1870	...	...	...	...	...	7	...	...	...	...	1	8	...	5	3	1	2	1	...	...	...	...	...	...	...	...	
1871	...	...	1	8	...	...	...	...	...	3	3	7	4	5	...	...	...	...	...	...	...	...	...	...	...	...	
1872	...	...	...	...	5	9	1	6	...	2	1	7	6	...	1	6	1	3	...	...	...	...	...	...	...	...	
1873	...	...	...	2	1	2	...	...	2	5	...	...	4	6	12	8	1	3	...	...	...	...	...	...	...	...	
1874	...	8	...	8	...	8	1	3	...	...	1	8	2	6	2	5	...	7	...	...	...	...	...	...	...	...	* This entry is doubtful.
1875	...	...	...	8	...	...	...	...	...	...	1	...	5	4	...	...	8	3	3	1	...	...	...	...	...	...	
1876	...	1	...	5	1	2	1	5	...	8	...	4	3	...	3	2	...	2	...	7	...	...	...	...	...	...	
1877	...	7	2	6	1	2	4	7	...	3	1	...	1	9	...	5	...	4	...	...	6	...	...	...	...	...	
1878	...	...	1	6	...	...	...	3	1	6	...	5	2	2	2	3	...	5	...	...	...	...	...	...	...	...	
1879	...	...	...	...	...	...	...	...	...	...	1	8	...	...	3	3	...	...	...	...	...	...	...	...	...	...	
Total	2	9	10	4	18	7	11	1	6	5	14	...	40	3	31	4	10	7	2	3	1	2	4	2	153	7	
Average	...	2	...	9	1	6	...	9	...	5	1	2	3	4	2	6	...	9	...	2	...	1	..	4	12	8	

[illegible]

There is apparently a difference of 2·4 inches between Jhang and Chinis and of ·7 inches between Shorkot and Jhang. The decrease in the rainfall to the south shown by the averages harmonises with local ideas. In discussing the agriculture of the district I shall again notice the rainfall.

18. Among the trees of the district the kikar (*acacia arabica*) is the most common and the most useful. Some very fine specimens may be seen in and near the civil station. It grows most luxuriantly in the Hethár villages on both the rivers, but is found in greater quantities on the Jhelam and upper Chenáb than further south. Kikar wood is of excellent quality, and is used for almost every agricultural purpose. More especially it is almost invariably used for the horizontal and vertical wheels, the axle of the vertical wheels, and other portions of the machinery of a persian wheel. As a young tree it is exposed to some danger from frost, but as it ages cold has less effect. It grows wonderfully quickly, and this is the principal reason why zemindars prefer it to the shisham (*tahli*). A number of young kikars will be found on almost every well, scattered over the area attached, but the shishams will only be close round the well. The pods of the kikar and the loppings are eaten greedily by sheep and goats, and in years of drought the tree is hacked and pruned in a most unmerciful manner. The shade of the kikar is peculiarly harmful to vegetation. Nothing will grow under it. The bark is used for tanning and distilling spirits. The cypress formed or Kábuli kikar (*acacia cupressiformis*) is also found scattered over the district; it is valued less than the kikar. The shisham or tahli (*Dalbergia sisso*) is found wherever there is cultivation, but is more abundant in the lowlands fringing the rivers, than in the Utár. The tree does not do well until its roots get down to water, and this takes place much sooner in the tract near the rivers than in the uplands. Until a few years ago there was a grove of magnificent shishams at the village of Thatteh Bála Rájá, but the river has now carried away almost the whole of the land. Shorkot way, almost every well in the Hethár boasts a clump of shishams, and many are extremely fine trees. There are apparently two varieties of the tahli,—one growing straight, and the other with the boughs drooping. The Ber (*Zizyphus jujuba*) is a hardy tree, and will grow anywhere, though it prefers the soil of the Hethár. It is considered unlucky to cut down a ber, and its fruit, when ripe, is gathered by every passer-by. The fruit is highly esteemed and largely eaten by the poorer agriculturists. Careful housewives collect and store large quantities of the berries when the crop is a good one. The fruit has a not unpleasant rough acid taste. It ripens about March. The siris (*acacia speciosa*) is rarely met with, and only near wells. It is a useless tree, but affords a good shade. The ukánh, kagal, or farásh (*Tamarix orientalis*) is not common anywhere except in the Bár and the Kachí. Those in the Kachí are of a gnarled stunted growth, and never attain any size, except near wells, and the zemindar does not often choose to grow the ukánh on his cultivated lands. In the Bár, wherever water collects or the soil is better and more moist than usual, the ukanh is sure to be found. A typical instance is to be found on the Chichawatni road to the east of Rorán-wálí. The wood of the ukánh is hard, and is used in a variety of ways.

Lái, the jhow of Hindústán, is found in great quantities along the river banks. It is used to make the wattle cylinders with which kacha wells are usually lined. Near Jhang and Maghiána it is cut and used for firewood. In the Jhang tahsil the 'Sohánjna'—horse radish tree (*moringa pterygosperma*) is found on almost every well. The fruit is preserved and used for chatnies and as a pickle. The tree is pruned regularly every year until it resembles a polled willow more than anything else. In Shorkot and Chiniot this tree is found, but not so abundantly. In the civil station, and notably near the Deputy Commissioner's house, some very fine old jand (*acacia leucophlea*) trees are to be seen. Elsewhere the stunted bush is usually the form in which this tree presents itself. A jand shrub is always a sure sign of good soil, whether in the Hethár or Utár. It is unusual to find jand scrub in the Hethár, but there are a few such tracts in the southern tahsil. Like the ukánh, the jand in the Bár prefers a moist low-lying position. The jand is usually a bush, but in the more favourable localities it becomes a small tree. I have already noticed the peculiarly dense growth of jand jungle in the south-east corner of the Shorkot tahsil. Here, though the surface of the soil is covered with kallar, the soil itself is good. The kallar has been washed on as a foreign substance in suspension and solution by the Rávi flood water or by the drainage from the saline upland of the Bár, and subsequently deposited by evaporation in or on the soil. The jand makes very good firewood, and affords capital grazing to camels, sheep and goats. The wán, jál, or pílú (*salvadora oleoides*), for by all three names is this tree known—is found in every part of the district. Individual trees of the largest size are found in the Kachi and the Bár. In the Kachi probably the finest growth is to be found in the villages of the old Garh Máharája iláka, close underneath the Thal, though there is also a thick jungle adjoining the Cháh Bhareri road just before it enters the Thal. Of the Bár growth there is a good specimen tract to be found east of Roránwálí. There are two kinds of jál,—the sweet and the sour, but the sour is very seldom found. The leaves of the *kaura* jál are darker in colour and longer and broader than those of the *mitha* jál. The tree is much used by the cattle-thieves of the Bár as a place of concealment for stolen animals. It is impossible, I am told, to discover the animal except by the closest scrutiny, and precautions are carefully taken against any movements on his part. The roots of the tree are the favourite home of the cobra. As fuel the wood is detestable. It leaves an enormous quantity of ash, has an extremely disagreeable smell, and gives but little heat. Its leaves are the favourite diet of camels during the first quarter of the hot weather. They act as a cooling alterative. The fruit, the berry called 'pílú,' is much prized by the poorer classes. Pílú is used both of the tree and the fruit. It is equally correct to speak of the pílú tree and of eating pílú, but it is incorrect to talk of eating wán or jál. The berry usually ripens shortly after the 15th Jeth (1st June). This year, 1880, there was a magnificent crop of berries that ripened a month earlier than usual, and thoroughly appreciated it was by the poor classes, with wheat selling at 10-12 seers for the rupee, and a harvest below the average. They lived for nearly two months among the jál tree with their flocks, and consumed scarcely anything but pílú berries and milk. The berry is supposed to be a cooling diet. The shade of the jál is esteemed as being particularly cool and a thoroughly good protection against the sun, and the day is passed

therein. The flocks are very fond of the berry also, and it is supposed to increase both the sweetness and the supply of milk. Quantities of the berries are dried and stored. The karil bush (*capparis aphylla*) is found along the jál in every portion of the district. The Kachí and the Bár are its favourite habitats. It affords grazing to sheep and goats, and when broken up and pressed, cattle eat or chew the twigs. It bears a pinky white flower, 'bátá,' and when in blossom the Bár assumes for a few days quite a gay appearance. The fruit (*dehla*) is but little used in this district. It is eaten when ripe, but the zemindars hardly talk about the crop, except if they do, never in the same terms or with the same interest as the berries when the pilá berry crop is discussed. The unripe berry is made into pickle, and also is much esteemed as a tonic (*masala*) for horses. The karil wood suffers less from white ants than other indigenous timber, but it does not enjoy perfect freedom from their attacks. It is used as rafters for houses, and for the spokes of the wheel on which the well pots are stung. All the more important indigenous trees and shrubs have been enumerated and described above. Among the other trees besides the fruit-bearing ones, are the bhor (*Ficus Indica*), the pipal (*Ficus Religiosa*), the bakáin (*Melia Azedarach*). The bhor thrives in a wonderful way in the tract near the rivers. There are some remarkably fine well-grown young trees in the sadr station and near the Karora nullah; and other fine trees are to be found all along the rivers. One celebrated tree, Pir ká bhor, was carried away by the river Chenáb some 11 years ago. It was situated in the village of Haveli Mohangir, and its shade covered, so I am credibly informed, over half an acre, not the many acres mentioned by a correspondent of the Agri-Horticultural society, noted at page 213, Stewart's Panjáb plants. The pipal is found like the bhor throughout the district, but less frequently. The bakáin is found here and there alongside a well, but not often. Other less common trees are the barna, the amaltass (*Catharticus fistula*), the phalai (*Acacia modesta*), the white siris (*Acacia elata*), and the jáman (*Sisymbrium Jambolanum*). In some of the *belas*, and more especially just above the junction of the Jhelam and Chenáb, a few specimens of the bahn (*populus euphratica*) are found. In Jhang the local name is 'Ubhán.' The mango, mulberry, peach, apple, orange, lime, pomegranate, lemon, grape, plum, guava, &c., are the fruit trees. The mangos are generally inferior. Most of the better zemindars have each his 'bágh' or mango orchard. Oranges and limes succeed very well, but the other fruits are not good.

19. Among plants are found the ak, bhúin, khip, phog, láná, lání, khár jawán or camel thorn, munjkána, kánh, harinal, bukil, thistle. The ak can hardly be termed a useful plant. When reduced to great extremity, goats and deer eat the leaves. Bhúin and khip no animal eats. Mr. Monckton says paper was made of khip in the Jhang jail. It certainly is not put to this use now, though experiments may have been made with the plant in former days. All my enquiries have been met with one answer, that it is valueless. Phog comes in the same category. It is found chiefly in the Thal or the sandy tracts of the Bár. It is seldom eaten by cattle.

Láná, lání and khár are all found in the district. There are two kinds of Láná,—‘gorá’ and ‘mithar’. Láná is evidently the ‘gora láná’ of the Montgomery Settlement Report, and Lání the mithar láná. I cannot quite follow the notes in the ‘Panjáb Plants,’ and I fancy the writer was not perfectly clear as to his facts. ‘*Anabasis multiflora*’ is apparently mithar láná or the lání of Jhang, but what salsolas are, the *Caroxylon fetidum*, and ‘*Suaeda fruticosa*!’ The latter is probably the láná or gora láná. ‘*Caroxylon Griffithii*’ is the khár. There is a considerable disagreement as to what plant or plants sajji is made from. In the Jhang district sajji is made from khár only. I have made repeated enquiries, and have always received the same answers, that sajji is made from khár, but that sometimes, assugar is sanded, and as a variety of jams are partly made from turnips and decayed figs, so is the bulk of the sajji increased by burning láná with the khár. I have been constantly in camp at the time the khár is cut, and I have never seen a single bundle of cut láná, and such adulteration is very uncommon. All four plants are excellent grazing for camels. Khár is the best, and lání the worst. Khár, Mr. Monckton happily phrases it, forms a useful alternative in the diet of camels that graze in the Bár. Láná forms the staple food of the camel for at least 8 months in the year. During May, June, July the jál is browsed, and then láná grazing commences. The process of manufacturing sajji is described in the Shahpúr Settlement Report, p. 17, and in the ‘Panjáb Products,’ pp. 86-88. ‘Jawain,’ ‘jawása’ camel-thorn, is found most abundantly in the waste and fallow lands subject to inundation from the rivers. It is a popular error to suppose that camels eat it. As a rank weed it does much harm to cultivation. The thistle, “leú,” is another weed that springs up in old sailáb lands. Harmal and búkil are two weeds characteristic of the Kachi well cultivation. Harmal grows chiefly on fellow lands. Búkil loves a light sandy soil, springs up with the crop, and chokes it.

The plant *Saccharum munja* is so characteristic of the Chenáb valley and plays so important a part in agriculture, that it deserves separate and special notice. It is found but infrequently on the Jhelam. The Jhelam soil is too good to be left to grow sar only. Along the Chenáb there is hardly a single village in which it is not to be seen. The area under sar increases as one goes south. There is more sar in Shorkot than in Jhang, in Jhang than in Chiniot. The difference in the country before and after the káná or flower stems are cut is astonishing. In October and November, in the tracts where this plant grows, the view is closed in on every side by the flower stems, and Settlement inspection is a most tedious business. A bird’s-eye view of the lie of a village is impossible, and the zemindars conduct you much as they like over the village lands. The leaves ‘sar,’ the flower stems ‘káná’ and ‘til,’ the stem sheaths ‘munj,’ are all parts of the same plant, “búti.” The leaves are used for thatching houses, the káná reeds being bound round the edges and across to strengthen the thatch. In the cold weather they are often the only pasturage of the cattle. They are also cut, chopped up, and mixed like bhúsa with grain, oil cake or green stuff. In the early spring the grass is fired, and the cattle graze on the green shoots that quickly sprout again. Only the inferior patches of

sar are treated thus as the plant seldom produces munj káná after being burnt. The dry sar leaf is not very fattening, but it serves to keep the cattle in condition, and to have 'bútán' plants inside the village boundary is always considered a great advantage. The káná reeds are used for a variety of purposes, for strengthening thatch, for making chairs, couches, and stools, in the frame work of bhúsá stacks 'palla' &c. The upper portion of the stem, 'til,' is the portion broken off, the sheath of which is made into munj. The sheath of the lower portion of the stem is never so used. The 'til' is made into 'sirki' mats, and is also used for the manufacture of winnowing trays, baskets, &c. Múnj is the most valuable of all the products of this plant. The manufacture of the munj into rope may be seen almost any day in any Jail in the western Punjab. The lower ends of a bundle of the petioles are first burnt, then they are pounded into fibres, and lastly twisted into a rope. The ropes used in agriculture are made almost entirely of múnj. The well ropes, the ties that attach the well pots to the rungs of the well rope, the string portion of charpoys, are all made of munj. Several villages have of late commenced to sell their múnj káná, and large sums are realised. This practice was, I am told, unknown before the commencement of this Settlement. The zemindars say there are two kinds of sar,—the white and black. The black has a broader and darker coloured leaf, and gives the longest and stoutest káná. The white sar plant is better grazing, and produces better munj. I am inclined to believe that they are one and the same plant under different conditions. The white sar is found in lighter soils than the other kind.

The kánh (*Saccharum spontaneum*) is only found in the moistest portions of lands adjoining the rivers. It is most valuable pasture for buffaloes. The zemindars go so far as saying that if there were no kánh there would be no buffaloes. It makes the thickest jungle I know, and is much liked on that account by wild pig. Pens are made from it. It is too valuable to be used for thatch.

20. As the well-being of the people of this district is so intimately connected with the existence of good pasturage, it will be useful to give a list of the principal grasses, with a few remarks. *Chembar* is the most common grass in the Bár, and appears to thrive in every kind of soil,—sandy, clayey, or saline. With good rain it attains a fair height, and is very dense in growth. It is one of the best. *Lam* is a feathery grass of average quality, and is found growing in kallar. *Kúriyá* is uncommon. It is a first class grass. Horses do particularly well on it. *Lunák* is a tall upstanding grass, requires a good deal of rain for a good crop, grows in kallar, and is a first class grass. *Gharra* is not unlike *lunák* in appearance, but grows higher and strouger. Is not found in kallar, but usually under bushes and where dung has fallen. Inferior in quality. *Gharra Madán* is a small grass, with seeds shaped like a wood louse, inferior in quality. *Dháman* is the best of all grasses. It is found in the largest quantities in the north of the district. To the south it is rare. When riding through the Bár I met with only a few plants. It requires a good soil and will not grow in kallar. The zemindars complain that the *dháman* is becoming scarcer and scarcer, and attribute the scarcity to the

frequent failure of the rains during late years. I do not think this idea is correct. It is a thick, juicy, pale green grass, and grows to a considerable height in favourable years. This grass, the zemindars believe, if in good condition, gives a semi-intoxicating effect to the milk of buffaloes who graze on it. *Phalwán* is another good grass. It is the principal grass of the Police rakh not far from Jhang, and makes excellent sweet hay, not so fragrant or tender as English hay, but still not to be despised. It is found mixed with *chembar* and *keú*. *Keú* is remarkable for the speed with which it springs up after rain, resembling *murk* in this quality, but otherwise it is a better and larger grass. *Murk* sprouts out in low-lying moist places after rain. Its leaves are not unlike those of the *dab*, but are narrower and grow straight up. Among the prostrate grasses are the *alett*, *dodak* and *kilanj*. All three are very hardy, and seem to do best in seasons of drought. They are dug up and given to cattle. Sheep and goods graze them on the ground. There are only two other grasses of the Bár that require notice,—the *khawt* and *pannt*. The *khawt* grows in hollows where water collects, and seems to prefer kallar. There is any quantity of it round Toba Tek Singh. It has a peculiar fragrant smell, and is of a dark brownish red colour. Cows graze upon it if hard pressed, but not otherwise. It contains little nutrition. The Bár housewives use wisps of this grass to clear out vessels used for churning or holding milk. The *pannt* is a very different plant, and is described roughly at p. 253, 'Panjáb Plants.' It like the *khawt* grows in hollows and depressions, but selects only the best soils. It is never seen in kallar. It grows in tussocks like the sar grass, but instead of drooping its leaves, stand out straight and stiff. Its roots are very long and tough. They are used for making ropes, and also for the brushes used by the weavers for arranging the threads of the web. *Khas khas* is obtained from the roots of the *khawt*.

21. There are no mines in the district. There are several quarries in the hills near Chiniot, where mill stones, pestles and mortars, dabgars, and mochis' blocks, kneading boards, oil pans for lamps &c. are made. These quarries have been assessed at Rs. 52, the assessment that has been paid since annexation, *vide* this Office No. 329, dated 28th February 1880, and Settlement Commissioner's No. 306, dated 19th March 1880. There are no other metal or mineral products. There are no kankar beds in the district. The Keráná hills are stated to contain iron ore, but it has never been worked. Some freestone was quarried near Chiniot and sent to Lahore for use in some of the Government buildings.

22. The beasts of prey found in the district are the wolf, the hyena, the wild cat, and a lynx. Wolves are numerous both in the Sándal and the Keráná Bár. The hyena is not so often seen. The name of *bár ká billi* is applied both to the long and short-tailed wild cats. The one is the domestic animal run wild, and the other is a true lynx. The first attains a much larger size than the domestic cat, and is remarkably fast. The lynx is a stouter animal. Another animal frequently met with is a kind of badger, a most hideous-looking creature, vernacular name—*bijjú*. In the interior of the Sándal Bár and between Gapní and

Khurianwalla, there are some droves of wild ponies. They are the offspring of escaped domesticated animals. Major Harcourt had a pair that were driven in a pony carriage. A remarkable but a true story is told of many of these ponies that got loose at Sialkot and found his way back to his haunts at Gapni. The parents of these wild ponies are said to have been in the fights between the Káthias and Bharwānas.

As a sporting district Jhang is not particularly good, and yet not bad. Black buck are only found in one portion of the district between the Kachi hills and the Shahpúr district. There are none in the Sándal Bár included in this district, except perhaps a few near the Gújránwála boundary. I have never heard of the Nilgai being found. Ravine deer are plentiful in the district. They especially affect the tract near Toba Tek Sing and Gapni, where there is very little cover. They are extremely wary, and it is very difficult to get within shot of them. In the Keráná Bár also, ravine deer are common, but not in such quantities as on the other side the Chenáb. There are one or two places in the Kachi near the Thal where they are generally to be found. Père David's hog deer, are found in almost all the large *belas* on the Chenáb. There are a good number in Shorkot, a few in Jhang and hardly any in Chiniot. Jackals are found in great numbers along the Chenáb. There are not very many in the Bárs. The Keráná hill swarms with them, and the fakirs give them a daily dole. Seeing the jackals fed is a remarkable sight. One of the fakirs stands on the edge of the wall and shout "*O gidro, gidro, áo ! áo ! áo !*" and the jackals seem to spring out of the ground by magic. Where nothing could be seen but a steep bare hillside is suddenly thronged by 20 or 30 jackals. Bits of *chopatti* are then thrown down to them, and the way in which they scamper down hill after the pieces is wonderful. Foxes are found all over the district. There are two distinct kinds, one fox is of a very light yellowish brown colour, so as to be almost indistinguishable from the colour of the ground after drought, with a curved sabre-shaped brush of a darker shade on the upper than on the lower side, and ending in a white tag. The second kind is very much darker in hue, and has a perfectly straight brush with a black tag. This species is more compact in form, with a stouter body than the first. Both foxes give capital sport, but the light coloured one has better staying powers, and is also faster than the other. Numbers are to be found in the tract of Bár adjoining the civil station. Hares are found more or less all over the district. In Chiniot there are but few, except in the interior of the Bár beyond Shahkot, where I have heard they are plentiful. In the Vichand they are seldom met with. There is a very good supply all along the Chenáb on the left bank. On the right bank the cultivation is too dense. They are thicker in the three eastern villages on the Rávi that are to be transferred to Multan, than any where else. The hare found in the moist alluvial lands adjoining the rivers is small in size, and does not afford good coursing. It has neither speed nor stamina. The hares of the Utár and Bár give excellent sport, but the Kachi and Thal hares are supposed to be the hardest of all.

There are a great number of pig in the jand jungle of Bhyra and the adjoining portion of Multán. From here they spread into the dense jungle

that extends from Jallálpúr to Alayár Júta, and the various thick *belas* on the river. The country is bad for riding, and though I have often driven for pig, I have only had one gallop after the mighty boar. Pig are found now and again in Bela Baggar near the junction of the two rivers, and in one or two places above Jhang. I am told too that there are pig in the Sándal Bár near Sàngla, but I have not been there myself.

Among game-birds, the bustard, *tukdar*, the *houbára*, *gorain*, *goraini*, sandgrouse, coulou, geese, ducks and quail are annual visitors. The larger bustard is found in the Sándal Bár, but is very rare. The *houbára* (pronounced *obára* here) is plentiful in the cold weather all over the district. I believe that they are found in the kallar plain round Toba Tek Sing in as great numbers as anywhere. The lesser bustard I have also seen near the sadr station. Coulou (*kúny*) come in with the cold weather in great numbers. They are found principally in the Hethár.

Geese come in later than coulou, and are particularly fond of the banks of the Jhelam and the lower Chenáb. They seem to like particular localities. I have never missed seeing them in great numbers in Alikhanána and Rashádpúr west of the Chenáb, and in Dab Kalán and Kacha Kabíra on the left bank. There are very few duck, and still fewer snipe in the district. I know of only one small pond in the whole of the Chiniot tahsil where duck are, as a rule, to be found. In Jhang they are equally scarce. It is only in Shorkot on the banks of the Rávi, that good shooting can be obtained. The best dands are in Nalera and Khatpúr Sándá. Teal, spotted tills, mallard, white eyes, shovellers, gadwalls, are the commonest kinds. Quail are plentiful both in spring and autumn. The autumn shooting is, I think, the best, and certainly the most enjoyable. The larger sandgrouse is found in large numbers all over the district in November and December. It is quite a sight to see the flocks flying to and from the Chenáb for their morning's drink. After December a fair number still remain, but not so many as before. The pintailed grouse has also been shot in the district, and the common sandgrouse stays here all the year round. There are very few black partridges in the district. In the Shorkot tahsil, but nowhere else, are there places where a few shots can always be got. The grey partridge is found infrequently all over the district.

23. The snakes most common in Jhang are the korait and the cobra. Reptiles. In the Bár many and wonderful snakes are said to exist. The following are among the most venomous : kurindia, khapra, khia, sang chúr, phanniar or chajjardar, the cobra, bandoia, gharara.

24. The main line of road in the Jhang district is that from Dera Lines of road and Ismail Khan to Chichawatni on the Lahore and ferries. Multán railway. There is a mail cart service between Chichawatni and Cháh Bhareri, a distance of 88 miles, under the management of the Deputy Commissioner of Jhang, and beyond Cháh Bhareri under the district authorities of Dera Ismail Khan. The road from Cháh Bhareri to within a mile or two of Toba Tek Sing, some 56 miles in

length, is annually laid down with sar grass. There is a considerable passenger traffic by the mail cart line, and during the cold weather months the road is thronged with strings of camels belonging to the Powindah merchants of Afghanistan passing to and from the railway station of Chichawatni. The two other principal lines of road are from Wazirabad to Multan, running along the Chenab through the towns of Jhang, Chiniot, and Shorkot; from Jhang to Shahpur which crosses the Chenab north of Jhang, and goes thence to Kot Isa Shah and along the Jhelam. A considerable amount of traffic passes between Lahore and Chiniot on the road that runs through the Bar. Another road runs up from Muzaffargarh through Rangpur, Ahmedpur, and Garh Maharaja to Atharah Hazari, and up north through Machiwal to Giro and Khushab. There is some little use made of the road from Jhang to Gupni and Gugera. The other roads are purely district roads, and scarcely made use of except by residents of the district. The old road to Leia, branching off from the Dera Ismail Khan line at Atharah Hazari, was of some importance when Leia was the head-quarters of a Commissionership, but is but little frequented now.

I do not think I am wrong in stating that besides the bridge of boats over the Chenab at Trimmu and a culvert here and there on the main roads, there are no bridges in the district.

The bridge of boats is of the utmost value, one might almost say indispensable, in the interests of the Powindas and passengers by the mail cart. The difficulty and trouble attendant on embarking a refractory camel in a ferry boat is only equalled by the roughness of the measures taken. The following is a list of the ferries in the district. Zemindars much prefer to cross the rivers when in flood on inflated skins. The passage is effected much quicker; there is no waiting for the boat, and there is no charge. Zemindars, even of the best class, prefer the sirnai to the ferry boat.

Statement showing the No. of Ferries in the Jhang district.

No.	NAME OF FERRY.	No. OF BOATS.	AMOUNT OF CON- TRACT FOR 1880-81.			REMARKS.
<i>On the River Jhelam.</i>			Rs.	A.	P.	
1	Chountra	2	420	0	0	
2	Mári	2	395	0	0	
3	Kot Isa Shah	2	460	0	0	
4	Machiwal	1	360	0	0	
5	Shahidán walla	1	170	0	0	
6	Sahjar	1	161	0	0	
7	Kalera	1	201	0	0	
8	Kot Khán	1	315	0	0	
9	Kot Maldeo	2	440	0	0	
Total		13	2,922	0	0	

Statement showing the No. of Ferries in the Jhang district.—(concluded).

No.	NAME OF FERRY.					No. OF BOATS.	AMOUNT OF CON- TRACT FOR 1880-81.			REMARKS.		
<i>On the River Chenab above its junction with the Jhelam.</i>							Rs.	A.	P.			
10	Chiniot	...	...	...	...	5	2,400	0	0	Including Chorgalli and Billi.		
11	Shekhan	...	...	...	...	2	710	0	0			
12	Sajjanke	...	...	...	...	2	435	0	0			
13	Tabli Mangini	...	...	...	...	2	510	0	0			
14	Alipūr	...	...	...	...	7	2,540	0	0			
15	Jhang	...	...	...	...	4	1,661	0	0			
16	Mohal	...	...	...	...	1	360	0	0			
Total						...	...	23	8,616	0	0	
<i>On the River Chenab below its junction with the Jhelam.</i>												
17	Trimmú	...	...	...	...	6	*			* Under direct manage- ment. † Do. do. Income forms part of Trimmú ferry.		
18	Haveli Bahadar Shah	...	...	...	...	2	†					
19	Islāmpūr	...	...	...	...	2	360	0	0			
20	Hassu wali	...	...	...	...	1	350	0	0			
21	Badh Rajbāna	...	...	...	...	1	450	0	0			
22	Kharranwala	...	...	...	...	1	260	0	0			
23	Dab Kalan	...	...	...	...	2	515	0	0			
24	Kacha Kabira	...	...	...	...	2	230	0	0			
25	Fakir Syál	...	...	...	...	1	230	0	0			
Total						...	...	18	2,395	0	0	

25. There are good serais at all the principal places of the district and Rest-houses and serais. along the more important roads, viz., at Chiniot, Bho-wānā, Khíva, Jhang, Bagrí, Shorkot, Nalera, Roránwālí, Toba Tek Sing, Bhamb, Athára Hazárí, Chah Bharerí, and at several places in the interior of the Bár. In the matter of rest-houses, I fancy not a single district in the Punjab is so well off as Jhang. There are first class bungalows at Chiniot, Bukhári, Toba Tek Sing, Shorkot, Ahmadpur, Chund, Kot Isa Shah. Besides these, there are either good houses, inferior serai rooms, or poky little police bungalows at or within reach of every place of importance. Before this year I was always out in the district until the 1st or 2nd week of May, without any discomfort, thanks to these rest-houses, otherwise it would have been impossible to be away from the Sadr, for Jhang, as Mr. Monckton notes, "is a region destitute of living brooks and shady groves."

26. The principal towns and villages are given below, their trade will be noticed and their history given in subsequent chapters :—
Towns:

No.	Name.	Population.
1 ...	Chiniot ...	11,477
2 ...	Maghiána ...	10,525
3 ...	Jhang ...	9,124
4 ...	Shorkot ...	3,153
5 ...	Ahmadpúr ...	3,436
6 ...	Kot Isa Sháh ...	2,819
7 ...	Lálíán. ...	2,776
8 ...	Wású Asthána ...	2,511
9 ...	Garh Máharája ...	1,668
10 ...	Rashidpúr ...	1,945
11 ...	Massan ...	1,201

CHAPTER II.

HISTORY AND PEOPLE.

27. For a clear account of what little is known of the history of district, it is first necessary to describe the localities of the various tribes who have from time to time played their small parts. Among the appendices will be found a map showing the portions of the district occupied by the more important tribes. Syáls occupy the whole of the country on the left bank of the Chenáb, from the southern boundary of tahsil Chiniot to the Rávi. On the right bank of the upper Chenáb a comparatively small tract only is held by them, lying south of a line drawn from the boundary of Kot Khán to the southern boundary of Shah Jíwána. On the Jhelam's right bank, below a point opposite the northern boundary of Kot Khán, the Syál villages are few; but from point of junction with the Chenáb down to the Muzaffargarh district, there is along the river an almost unbroken chain of Syál villages. Away from the river most of the villages are the property of Beloches. In what is now Chiniot tahsil on the left bank of the Chenáb, the Chaddars inhabit the tract between the Syál country and the villages of the Syuds of Rajoa. Beyond them come a motley mixture of Syuds, Harrals, Khokhars and miscellaneous Jats. The tribal limits west of the Chenáb in the Chiniot tahsil are remarkably clearly demarcated. The Bhattís, Lálís, and Nissowáns hold the whole of the northern portion in the above order from a few miles beyond the Jhelam tahsil boundary to that of the Shahpúr district. Below these tribes along the river bank come the Gilotars, next to the Shahpúr boundary, then Harrals, Syuds, and unimportant Jats, until the Jhang tahsil boundary is again reached, coinciding with that of the Shah Jíwána iláka. This tract, the property of the two Syud families, the descendants of Pir Fattah Khan and

Shah Jiwána, extends to the country held by the Syáls in the Vichand in the south-west, and northwards to the Khokhar villages above. North of the Syáls' country, bounded by Kot Khán, come the Ákeras, a Jat tribe of no historical interest but of considerable present influence. Beyond them, Khokhars, Jats, and Beloches along the river, and Khokhars in the upland villages, are the proprietors as far as the Shahpúr boundary. West of the Jhelam above the Syál country, almost all the villages belong to Beloches.

28. The history of Jhang is the history of the Syáls, and until the reign of Walidád Khán, in the first half of the 18th century, the annals of the district and its tribes are enveloped in cimmerian darkness. Apparently no facts are forthcoming, for the simple reason that there are none. Passing by the expedition of Alexander and the march of Hephæstus down the left bank of the Jhelam and lower Chenáb, through the country now included in this district, the first tangible facts are gained from Baber's memoirs. In the year 1504-5 A.D., when Baber passed through the Khyber pass and advanced on Peshawur, he wrote: "The Government of Bhera, Khúsháb and Chenáb was held by Syud Ali Khán. He read the Khutbeh in the name of Iskandar Bahlol, and was subject to him. Being alarmed at my inroad, he abandoned the town of Bhera, crossed the river Behat (Vehat is still the local name for the Jhelam) and made Shirkot (Shorkot?) a place in the district of Bhera his capital. After a year or two the Afgháns having conceived suspicions against Syud Ali on my account, he became alarmed at their hostility and surrendered his country to Doulat Khán, who was Governor of Lahore. Doulat Khán gave Bhera to his eldest son Ali Khán, by whom it was now (1519) held." Ali Khán and his father were governors under the Lodi dynasty of Delhi, then represented by Ibrahim Lodi, the last of his line. Shortly before the above passage, Baber speaks of the country of Bhera, Khúsháb, Chanáb and Chaniút as having been long in the possession of the Turks, and ruled over by the family of Timúr Beg and his adherents and dependents ever since his invasion of India in 1398. The matter of most interest to the historian of Jhang is the locality and limits of these countries. Where was the Chanáb country? Is the Shirkot where Syed Ali Khan fled, the Shorkot of to-day? If so, how could Baber write of it as being in the district of Bhera, for the Khúsháb country must have intervened? I am inclined to identify Shirkot with Shorkot, and to place the Chenáb country south of Chaniút and Khúsháb. Whether this is right or wrong, it does not affect the point with which I am most concerned, which is that Jhang and the Syáls were not of sufficient importance to be mentioned at the commencement of the 16th century A.D. They remained equally unknown and unnoticed during the two centuries that elapsed between Baber's first invasion and the accession to the throne of Mahomed Shah in 1720 A.D. It was not until the stirring times during which the dynasty of the Moghals tottered and fell, the half century that witnessed the rise of the Sikhs and the Mahrattas, and the devastating inroads of Ahmed Shah, that the Syáls can be said to have been even temporarily independent. Previous to Walidád's accession, the Syáls probably were a pastoral tribe, but little

given to husbandry, dwelling on the banks of the rivers and grazing the cattle during the end of the cold and the first months of the hot weather in the low lands of the Chenáb, and during the rainy season in the uplands of the Bár. The greater portion of the tract now occupied by them was probably acquired during the stormy century that preceded the conquest of Hindustan by the Moghals. During this period the country was dominated from Bhera and sometimes from Multán. The collection of revenue from a nomad population inhabiting the fastnesses of the Bár and the deserts of the Thal, could never have been easy, and was probably seldom attempted. Left alone the Syáls applied themselves successfully to dispossessing those that dwelled in the land,—the Nols, Bhangís, Mangans, Marrals, and other old tribes,—amusing themselves at the same time, with a good deal of internal strife and quarrelling, and now and then with stiffer fighting with the Kharrals and Beloches. Then for 200 years there was peace in the land, and the Syáls remained quiet subjects of the Lahore Sáls, the seats of local government being Chiniot and Shorkot. Walidád Khán died in 1747, one year before Ahmad Sháh Abdálí made his first inroad and was defeated before Dehli. It is not known when he succeeded to the chieftainship, but it was probably early in the century, for a considerable time must have been taken up in the reduction of minor chiefs and the introduction of all the improvements with which Walidád is credited. It was during Walidád's time that the power of the Syáls reached its zenith. The country subject to Walidád extended from Mankehra in the Thal eastwards to Kamália on the Rávi, from the confluence of the Rávi and Chenáb to the iláka of Pindi Bhattián beyond Chiniot. He was succeeded by his nephew Inayatulla, who was little if at all inferior to his uncle in administrative and military ability. He was engaged in constant warfare with the Bhangí Sikhs on the north, and the chiefs of Multán to the south. His near relations, the Syál chiefs of Rashidpúr, gave him constant trouble and annoyance. Once indeed a party of forty troopers raided Jhang and carried off the Khán prisoner. He was a captive for six months. The history of the three succeeding chieftains is that of the growth of the power of the Bhangís and of their formidable rival the Sukarchakeia misl, destined to be soon the subjugator of both Bhangís and Syáls. Chiniot was taken in 1803, Jhang in 1806. Ahmad Khán, the last of the Syál Kháns, regained his country shortly after in 1808, but in 1810 he was again captured by the Mahárája who took him to Lahore and threw him into prison. Thus ended whatever independence the Syál Kháns of Jhang had ever enjoyed.

29. The previous paragraph contains a brief sketch of the history of the

Early history of the Syál
clan up to Walidád Khán's
reign.

Syáls and their rule over the southern portion of the country now comprised in the Jhang district. I now proceed to fill in the details so far as they have been ascertained. The sources from which the information now given has been compiled, are the history of the Syáls by Moulvie Nur Mahomed Chela, Griffin's 'Panjáb Chiefs,' and local stories and traditions. The Syáls are descended from Rai Shankar, a Panwar Rájput, a resident of Dharanagar between Allahabad and Fattehpur. A branch of the Panwars had previously emigrated from their native country to Jaunpur, and it was there that Rai Shankar was born.

One story has it that Rái Shankar had three sons,—Séu, Téu, and Ghéu, from whom have descended the Syáls of Jhang, the Tiwánás of Sháhpúr, and the Ghebás of Pindi Gheb. Another tradition states that Syál was the only son of Rái Shankar, and that the ancestors of the Tiwánás and Ghebas were only collateral relations of Shankar and Syál. On the death of Rái Shankar we are told that great dissensions arose among the members of the family, and his son Syál emigrated during the reign of Aláúddín Ghorí to the Punjab. It was about this time that many Rájpút families emigrated from the provinces of Hindustán to the Punjab, including the ancestors of the Kharrals, Tiwánás, Ghebás, Chaddhars and Pánwar Syáls. It was the fashion in those days to be converted to the Mahomedan religion by the eloquent exhortations of the sainted Báwa Farid of Pákpattan, and accordingly we find that Syál in his wanderings came to Pákpattan, and there renounced the religion of his ancestors. The saint blessed him, and prophesied that his son's seed should reign over the tract between the Jhelam and Chenáb rivers. This prediction was not very accurate. Báwa Farid died about 1264-65. Syál and his followers appear to have wandered to and fro in the Rechna and Jetch Doábs for some time before they settled down with some degree of permanency on the right bank of the Jhelam. It was during this unsettled period that Syál married one of the women of the country, Sohág, daughter of Bhái Khán Mekhan of Sáiwál, in the Sháhpúr district, and is also said to have built a fort at Siálkot while a temporary resident there. At their first settlement in this district, the Syáls occupied the tract of country lying between Mankhera in the Thal and the river Jhelam, east and west, and from Khúsháb on the north to what is now the Garh Máharájá iláká on the south. Mankhera is said to have been founded by Mának, and Amowáni, now called Haidarábád, by Amo, sons of Dhiráj. The tomb of Chúchak, a leading man of the Kohli branch, is at Kotli Bákir Sháh, and Maggú the ancestor of the Maghiánas, emigrated to Maghiána from Lohabhir. About the year 1462, Mal Khán, ninth in descent from Syál, founded Jhang Syál on the banks of the Chenáb. The old town of Jhang was situated west of the tomb of Núr Sháh, south west of the modern town, and was subsequently carried away by the river. There are still some traces of the old town to be seen. Mr. Monckton wrote of Mal Khán,—“He was the first of a race of rulers who under the title of Khán, exercised an extensive sway over the neighbouring countries, till the rising fortune of the Sikhs, guided by the genius of Ranjít Singh, successively absorbed all the minor principalities within the territory of the five rivers.” I think Mr. Monckton much over-estimated the power and influence of the Syáls before the reign of Walidád Khan. At this period the throne of Dehli was occupied by the Lodis, and this part of the Punjab was included in the governments of Chiniot and Shorkot and Khusháb. There were, however, no resident governors, and the Syáls paid in their revenue to the Nols, who were the dominant tribe in the country round Jhang. Mal Khán, after the foundation of Jhang, visited Lahore, and obtained the farm of the Jhang revenues from the Governor. Another account is that he met the Governor at Chiniot. Mal Khán belonged to the Chuchkáná branch of the Syáls. He was succeeded by his eldest son, Doulat Khán, who was killed near the Thal while repelling a Beloch raid. His tomb is still to be seen at Wású Astháná. The chieftainship descended to

his son Ghází Khán, whose first act was to revenge his father's death, and inflict severe punishment on the Beloches. He built a fort on the banks of the Jhelam, a short distance above its junction with the Chenáb, where the village of Chountra now stands. It is related that Ghází Khán was the first Syál chief who established a standing army. The next prince was Jallál Khán, son of Ghází Khán. He appears to have been deficient in ability as a governor, and unable to restrain his unruly tribesmen. The minor chiefs of Khíva and Pahárpúr now first appear on the scene. Rashid-púr was founded by Jallál Khán's son Rashíd, and Pahárpúr by Pahár Khán, a nephew of Jallál Khán, who had quarrelled with his uncle, and set up an independent chiefship. Pahár Khán treacherously slew his uncle while on a visit to him, made with the object of effecting a reconciliation. He was succeeded by his son Rashíd Khán, who abdicated in favour of his son Feroz Khán. Feroz Khán's first enterprise was to exact retribution for his grandfather's murder. His brother Kabír Khán collected the youth of Jhang and took by storm the fort of Pahárpúr. All the descendants of Pahár Khán who were taken, were put to the sword. The remnant that escaped founded the fort of Gilmála about 15 miles to the south west of Jhang. After this exploit Kabir Khán and Feroz Khán ruled jointly, and when Feroz Khán died his brother ascended the throne. The next chief was Jahán Khán. The eight sons of Jahán Khán were superseded, and their cousin Ghází Khán obtained the chieftainship. Ghází Khán lost his sight, and abdicated in favour of his son Sultán Mahomed, between whom and the Kharrals there was constant hostility. The story told at page 510 of the 'Panjáb Chiefs' does not agree with account given by Moulvie Núr Mahomed. Prince Moujuddín stopped at Kamália on his way to Múltán and Dera Ghází Khán. He was at the time leading an expedition to punish some rebellious Beloches. Saádatyár Khán, the Kharral chief, complained to the prince of the conduct of the Syáls and their leader Sultán Mahmúd. The prince ordered Sultán Mahmúd to be thrown into confinement, but deferred enquiry into the charges until his return from the frontier. The nobleman who was deputed to arrest Sultán Mahmúd and take him to Múltán, was so pleased with his manners and address, that he interceded with Moujuddín for him. The prince then sent for Sultán Mahmúd, but Saádatyár Khán, fearing that the true cause of the enmity between himself and the Syál chief would leak out and the groundless nature of his accusation be exposed, intercepted the messenger and beguiled him into adding to his message the advice that it was Sultán Mahmúd's best policy to make friends with the Kharral and give him his sister in marriage. The Syál was so exasperated at his proposal, that he then and there killed the messenger with his fists, and was himself slain in the *melée* that ensued. All this took place at Múltán, for Sultán Mahmúd's tomb is there. Sultán Mahmúd left no children, and was succeeded by his brother Lál Khán, whose mother was a prostitute. He was taunted by Saádatyár Khán for this taint in his ancestry, and in revenge he plundered up to the walls of Kamália, and ravaged the Kharral country. Lál Khán died childless, and was succeeded by his brother Mahrám Khán, of whom nothing is known. He met his death at the hands of a herdsman who shot him in mistake for a robber, and his son Walidád reigned in his stead.

30. Walidád Khán was by far the most able chieftain that ever ruled the Syáls. His talent for civil administration was only equalled by his skill and success as a military leader. Under his beneficent rule a rude people first learnt what justice was ; severe punishments and a rigorous enforcement of the track law put a stop to crime ; a moderate assessment of land revenue resulted in an extension of cultivation and the construction of a number of wells that now seems fabulous ; while the kingdom of the Syáls advanced to limits that it never knew before and has never reached since. When Walidád Khán succeeded his father, the boundaries of his kingdom were most narrow. Within a few miles of Jhang fort to the north lay lands that acknowledged the sway of the Máhní chief of Khíva. Southwards another and more powerful chief, a Nithráná Syál, with his head-quarters at Mírak Syál, 26 miles from Jhang, ruled over the country from Shorkot to within 12 or 15 miles of Jhang. In the Vichand was the independent chief of Massan, a Máhibána Syál, whose territory marched with that of the Bhairo Khokhars to the north, and the villages of the Sháh Jíwána iláká, subject to the Syud Latíf Sháh, a descendant of Pír Fatteh Khán, on the north-east. Beyond the Syud came the lands of the Rihán chief of Kálowál. Across the Chenáb Rashídpúr was the seat of Syál chiefs, sprung from the same stock as Walidád, and whom he never in the height of his power regarded as other than allies. Eastward the sovereignty of the Bár was disputed by the Kharrals, represented by the Kamália chief. The relation in which these chiefs stood to the ruling power in the first quarter of the 18th century is not clear, but this much appears, that they were independent of the Jhang Syáls, and probably paid (or often did not pay) their revenue direct to the governors of Chiniot and Múltán. As was the custom, as his ancestor Mal Khán had done with the Nols, so did Walidád Khán with these neighbouring chiefs of Khíva, Massan, Shorkot, Mírak and Kamália. He first obtained from the Lahore governor the right to collect their revenue or tribute, and his next step was to make them subject to himself. His first object was secured by stratagem. The Dehli empire was fast hastening to its dissolution, and when the time came for payment of revenue, Walidád pretended to be ill, and delayed payment. At the same time he contrived to have hints conveyed to the neighbouring chiefs that he was a defaulter only because the government of the day was too weak to enforce the collection of its dues. The rival chiefs fell into the snare and refused payment. No sooner had they thus publicly thrown off the yoke than Walidád Khán repaired to Chiniot and paid in his revenue. The Dehli governor complained of the conduct of the other chiefs, and Walidád at once offered to pay up their revenue also, if their countries were made over to him. His offer was accepted. A small force of cavalry was deputed to assist him, and Walidád then sent for the chiefs who obeyed the summons. They were thrown into prison for a short time, but were subsequently released and granted service jaghirs. The subjection of these chiefs was followed by the reduction of the Syud rulers of Rajoa, Latíf Sháh, and of the Khokhars of Mári and Bhairo. An invasion of the Beloches of Sáiwál in aid of the Khokhars was also repelled with loss by his general, Sharíf Khán Aljáná ; 'Izzat Baksh Rihán was his deputy in Kálowál. It is

not known how Walidád acquired the Kálowál iláká, but most probably obtained it as a portion of the Chiníot province. The governorship of Chiníot province was next bestowed upon the loyal (for he never proved himself other than the slave of the Dehli empire) and fortunate Syál. His supremacy was now acknowledged over the whole of the country included in the district of Jhang, as it at present exists, together with large slices of the neighbouring districts of Montgomery and Dera Ismail Khán. He died in 1747 at Sodra, near Wazírábád, while in attendance on Máhárájá Ká Mal, the governor of Máltán. It has been said that Walidád's loyalty to Dehli was an instance of extraordinary fidelity, considering the character of the times he lived in, and the power and influence he possessed. I am rather inclined to think that Walidád's adherence to his rulers was more creditable to his head than his heart. Had he set himself up as an autocratic chief and rebelled against the Imperial rule, he must have known that the task of keeping together a body of turbulent people only lately in allegiance to other chieftains, would have proved too difficult for even all his influence, prestige, and ability. A single reverse at the hands of the Dehli governor would have been fatal to his supremacy. His followers would have deserted, and he himself have been reduced to involuntary exile or to the position of a petty subordinate chief.

31. His successor Inayatulla Khán was his nephew, and had also married his daughter. This chief was little inferior to Inayatulla Khán, an administrator to his uncle, and in military genius was probably more than his equal. He is said to have fought and won 22 battles. He reigned 40 years from 1747 to 1787. Able as he was, he could not stem the resistless wave of Sikh success, and at his death the Syál ascendancy was clearly on the wane. Amid encroachments of the Bhangí Sirdárs from the north, inroads from Máltán on the south, successive raids by the plundering freebooters, that accompanied Ahmad Sháh's invasions, attacks by the Beloches and Tiwánás, and disunion and dissensions among the Syáls themselves, it was no easy matter to steer the ship of Syál rule safely into haven. We have more facts about Inayatulla Khán's reign than any other. At the commencement he associated his brother-in-law Sháhádát Khán with him in the chieftainship. They sat on one throne, sheathed their swords in one scabbard, ate and drank together, and in a word rivalled in their friendship the most renowned examples afforded by antiquity. This fraternal affection did not last long. A quarrel took place. Sháhádát Khán left Jhang and withdrew to Kádirpúr. He got an army together there, and marched upon Jhang. After crossing the Chenáb he was met at Sultánpúr by Inayatulla Khán and was there defeated and slain. Meanwhile an Afghán, named Dín Muhammad, had seized upon Mári beyond Kot Isa Sháh, but Inayatulla, after disposing of Sháhádát Khán, marched against the invader and defeated and drove him out of the Jhang territory. The Syáls of Rashidpúr had now become powerful, and were noted for their turbulence and bravery. To punish them for some disobedience, Inayatulla obtained the aid of some Dourání horsemen from the Governor of the day, and harried their lands. In return for this, forty horsemen of the Syáls of Rashidpúr gave the chief a taste of their quality by taking him prisoner at Jhang, and carrying him off under

the eyes of his army to Rashidpúr. They kept him in confinement in the castle of Sat in the Thal for some six months. Apparently neither during this nor the previous reign had the rule of the Syáls extended very far down the right bank of the Chenáb, for among Inayatullá's achievements is reckoned his defeat of the two Sikhs who were the sub-governors of Islámábád, and the annexation of their charge. This incensed the governor of Multán and an ambuscade was laid for Inayatulla while on a visit to Shorkot. He, however, got word from the Sargánás of Kund Sargána of the plan, and collecting an army of Káthiás and Kamlána, Rajhána and Sargána Syáls defeated the Múltán troops with great slaughter at Kotla Afgháná close by Shorkot. At one time Inayatulla found it politic to pay Malik Sher Tiwáná black mail as the cheapest way of protecting the outlying pargana of Mári. Subsequently, thinking himself strong enough, he discontinued the payment. Sher Khán then assembled his clan, and driving the Syáls out of Khái, a few miles north of the present district boundary on the right bank of the Jhelam, laid siege to Kot Langar, now Thatteh Langar, just inside the present boundary. Here Inayatulla met and defeated the Tiwáná force. Both sides are said to have had some Sikh chiefs as auxiliaries. At another period the Syál chief defeated and subdued the Beloches of Haiderábád in the Thal. He also took the fort of Uch founded by a Belot Syud who had settled in the Kachi during his reign. It is in this reign that the Bhangí Sirdárs made their power felt. About 1760 Harí Singh ravaged Jhang and imposed a tribute. About 1778 Inayatulla ceased to pay tribute and recaptured Chiniot, but it had apparently again fallen into the hands of the Bhangis before his death. It is related of Inayatulla that he met Jahán Khán, the grandfather of Dost Mahomed Khán of Kábul, while on his way back from Hindustán, who asked for one of his sisters in marriage. There were three or four unmarried, but the proud Syál sent word to Bhowání Dás, his Diwan, to have them all married at once, and declined the proffered alliance on the ground that he had no sisters unmarried.

32. Inayatulla died in 1787 and was succeeded by his imbecile son Inayatulla Khan's successors. Sultán Mahmúd, whose weakness only served to set off the great force of character possessed by his wife Mussammat Niámat Khátun, the daughter of Sháhádat Khán. Mánh Singh, father of Ranjít Singh, nourished designs on Jhang, but the army collected by Mussammat Niámat Khatun was so formidable, that he postponed his invasion. Shortly after Sáhíb Khán, half brother of Sultán Mahmúd, who was constantly endeavouring to dethrone Sultán Mahmúd, sought assistance from Mánh Singh, and was promised aid ; but the promise was not carried out, as Timúr Sháh was advancing on Múltán. Finally Sáhíb Khán obtained an entry into Jhang by treachery, and with 85 men only at his back, captured the fort and put Niámat Khátun and Bhowání Dás, the Diván, to death. Sultán Mahmúd was absent from Jhang and marched against the usurper, but he was inveigled to a meeting, seized and imprisoned at the fort of Chountra, and shortly afterward Sáhíb Khán put him to death. Sáhíb Khán was himself assassinated at a marriage feast a few months after. Sáhíb Khán left a son by a woman of the prostitute class who died three years after at Uch, but his successor was Kabir Khán of the line of Jahán Khán, who

married Sāhib Khān's widow, the daughter of Umr Khān Syāl. After peaceful and uneventful rule,—the calm preceding the storm,—he was dethroned by, or abdicated in favour of his son, Ahmad Khān, the last of the Syāl Khāns. This was in 1801. Kabir Khan fled to Uch, where he was besieged unsuccessfully for two months by Ahmad Khān. When the siege was raised Kabir Khan fled to Rangpūr, where he died. Seven months after the accession of Ahmad Khān, Ranjīt Singh laid siege to and took Chiniot, then held by Jassa Singh, the son of Karam Singh Dūlā, a chief of the Bhangī confederacy. I have not been able to glean any clear account of the varying fortunes of Chiniot between the death of Walidād Khān and its capture by Ranjīt Singh, but the town seems to have been held almost continuously by the Bhangī Sirdars. After making himself master of Chiniot, Ranjīt Singh turned towards Jhang, but Ahmad Khān bought him off by agreeing to pay Rs. 70,000 a year and a mare. The first instalment was sent through Fattēh Singh, Kālīānwalla. Ahmad Khān paid the tribute for two or three years, and then in S. 1862, A. D. 1805-6, the Māhārājā again invaded Jhang with a large army. The Syāl chief again endeavoured to stop the Sikh advance by a payment of *nazarānā*, but his offers were rejected. Jhang was invested, and after some hard fighting the town and fort were captured. Ahmad Khān fled to Mūltān where he found an asylum with Muzaffar Khān, who granted him an allowance of Rs. 25 a day. From Jhang the Māhārājā crossed the Chenāb and exacted Rs. 3,000 as *nazarānā* from the Syud ruler of Uch. Thence the Sikh leader turned south and marched on Mūltān, and his progress was only stopped within a short distance of the city by a payment of Rs. 70,000. Jhang, with the exception of the Vichand, was made over on farm to the Sikh chief Fattēh Singh, Kālīānwalla, the Vichand tract being entrusted to Dyāl Singh and Fattēh Singh Lamah. Fattēh Singh appointed Dāl Singh as his sub-governor. The following year Ahmad Khān, with the assistance of a Pathān force given him by the Nawāb of Mūltān, made an effort to recover his kingdom. He captured Shorkot, and having established his authority in the southern portion of Jhang, he advanced on the capital, only to retire on the arrival of Fattēh Singh with a force. He next crossed the Chenāb and took refuge in the Uch fort, where he was pursued by Fattēh Singh. There they came to terms, and Fattēh Singh restored what portion of Jhang he held to Ahmad Khān on his agreeing to pay an annual rent of Rs. 70,000. Ahmad Khān was reinstated, and shortly after drove out the Sikh governors of the Vichand. The next ten years were passed in peace and quietness. Ranjīt Singh was too fully engaged on other expeditions to give any attention to the affairs of Jhang. In 1810 the Māhārājā had made an unsuccessful attack on Mūltān, and on his way back to Lahore he visited his chagrin on Ahmad Khān who had accompanied him as his feudatory, and whom he suspected of favouring the Mūltān Nawāb. He threw him into confinement, and carried him away to Lahore. The government of Jhang was entrusted to Lālā Sujān Rāi. Ahmad Khan's eldest son, Ināyat Khān, fled to Haidarābād in the Thal, where he was followed by Nāng Sultān, the Fakīr ruler of Uch. Sujān Rāi then took possession of Uch. Eventually Ahmad Khān was released from prison and granted a jaghir of Rs. 1,200 at Mīrowāl in the Amritsar district, on Ināyat Khān his son being

made over to the Māhārājā as a hostage. Ahmad Khān died in 1820 on his way back from Multān at Ali Khanānā, and was buried at Jhang. His son Ināyat Khān, succeeded to his father's allowances and jaghirs, and was killed in 1838 near Rassūlpūr fighting on the side of Diwān Sāwan Mal against Rājā Gulāb Singh. Ismail Khān, the younger brother of Ināyat Khān, and the present head of the family, went to Lahore on the death of his brother in the hope of obtaining a grant of succession to his brother's jaghir. But owing to the machinations of Gulāb Singh, the jaghir was confiscated, and all that he got was an allowance of Rs. 100 a month. He remained at Lahore for five years and then his pension was discontinued. He then returned to Jhang and lived there in great poverty on an allowance of Rs. 2-Rs. 3 a day granted him by Diwān Sāwan Mal until the Multan rebellion and the annexation of the Punjab. His services during the campaign of 1848-9 and in 1857 together with his rewards and allowances, will be found detailed at pp 506-7 of the 'Panjāb Chiefs.' More it is unnecessary to add.

33. The names of the persons who farmed the revenues of the Jhang province, including Pindi Bhattiān, Farūka and Syud-wālla, and excluding Kālowāl and Garh Māhārājā and Ahmadpūr from Samvat 1873 to 1903 are given below.

YEAR.		NAME OF FARMER.	CONTRACT MONEY.
Sambat.	A. D.		
			Rs.
1873	1816	Sujān Rāi	3,75,000
1874	1817	Sūkh Dyāl	4,00,000
1875-6	1818-9	Jowālā Singh	4,00,000
1877	1820	Sūkh Dyāl	4,10,000
1878	1821	Sāhib Ditta and Shām Singh	4,00,000
1879	1822	Shām Singh Jowālā Dās Lāllā Rām	4,20,000
1880	1823	Jassa Singh, Doulat Rām Shām Singh	3,25,000
1881	1824	Bākar and Jalla Bhawānā	4,40,000
1883	1825	Shām Singh, Abdul Rahmān	4,35,000
1882	1826	Afzal Khān, Jowahir Singh	4,40,000
1884	1827	Jawand Singh	3,40,000
1885	1828	Māhārāj Attar Singh, Bhola Nāth	4,45,000
1886	1829	Dāl Singh, Devī Bakhsh	4,55,000
1887	1830	Dāl Singh	4,56,000
1888	1831	Rām Kour of Jhang	4,67,000
1889-1900	1832-44	Diwān Sawan Mal	4,35,000
1901-1903	1845-47	Diwān Mūl Raj	4,35,000
1903-4	1847-8	Rallia Rām	5,00,000
1904	1848-9	First Summary Settlement by Mr. Cocks.	

The amount of revenue shown includes the Chabutra tax, and is an approximation on returns furnished by Kānungos. Too much credit should not be attached to the figures. The Jhang province contained the tract that constituted the old district of Jhang. The Kālowāl ilāka belonged to Bhera, and those of Garh Māhārājā and Ahmadpūr to the province of Mūltān. Rājā Ghulāb Singh held the farm of Kālowāl for many years, and the severity of his exactions was such that his name is still execrated. Garh Māhārājā and

Ahmadpár were under Sáwan Mal. The results of Sáwan Mal's rule on the welfare of this district will be discussed in the chapter devoted to the fiscal history of the district. For an account of his rise to power, his administration of the Máltán province, and his death, pp. 272-285 of the 'Panjab Chiefs' should be consulted. There also will be found the history of Mál Raj's short pro-consulship and his downfall.

34. The Nols, as has been mentioned before, occupied the lowlands fringing the Chenáb around the site of Jhang before the Syáls. Nothing trustworthy is known about their origin, but their traditions carry their family back to one Dhan, a Rájá of Bikánír, who left his native country and settled at old Jhang. At that time the country was under a dynasty of Brahmin kings. Nol, the ancestor of the Nol tribe was a son of Dhan. The Syáls for some time after their first arrival were subject to the Nols and paid tribute through them, but they appear to have always been refractory and rebellious dependents. The Nols were reduced by the Syáls under the leadership of Mal Khán Chuchkána. The Nol leader was then Todir. They now hold several villages near Jhang and in the Kachi. Sujáwál is a zaildar and their headman. He lives at Pakke-wála about 3 miles from Jhang on the road to Sháhpúr. The Nols prefer cattle breeding to agriculture and cattle lifting to either.

35. The Bhangús are another aboriginal tribe, whose origin is lost in the depths of antiquity, which is another way of saying that they are too stupid or too careless to connect themselves by a fictitious ancestry with some Rájput rájá or a Mahomedan emperor. They can give no account whatever about themselves. They were rulers over the Shorkot country before their displacement by the Syáls. Mirak, who founded the chieftainship of Mirak, was a Nithrána Syál a descendant of Nithar, brother of Mal Khán the founder of Jhang. He was Díwán to the Bhangu ruler, but rose in insurrection against his master and managed to make himself master of the country. The seat of Government was previously Shorkot, but he founded Mirak Syál six miles north, built a fort and ruled the country from there. At Walidád Khán's reign Sultán Bálá, the 4th or 5th in descent from Mirak, was the chief, and was reduced to submission by Walidád Khán. The male line is now extinct. Two female descendants still live in poverty at Mirak, and with them the line ends. The village and fort of Mirak is situate on a promontory of high ground between the lowlands of the present Chenáb valley and a wide depression in which the river flowed long ago, and embosomed in a fine grove of date palms is one of the most picturesque spots in the district.

36. The Syuds of Rajoa were virtually an independent clan until the reduction of the country by Ranjít Singh. They were once defeated and subdued by Walidád Khán, but he restored the country to them immediately afterwards out of respect for their holy origin. The Rajoa Syuds have always been noted as a brave, manly, military clan, and their independence was probably as much due to their quality as warriors as to the sacred character of their family. They are a branch of the Bukhári Syuds, the principal Syud family in this district.

their ancestor was Sháh Doulat, a Syad fakír, who came from Uch Syad Jallál in Baháwalpúr and settled in this part of the Punjab. He remained for twelve years in the river Chenáb opposite the village of Thatteh Bálá Bájá, rapt in religious meditation. The Chenáb contains numerous islands, and it is probable that the fakír, though said to have lived in the Chenáb, used times to rest himself on dry ground. The next stage in his career was the performance of many wondrous miracles, and he then left the river and settled at Rajoa where he died and where his tomb is still to be seen. The fame of the fakír and miracles that he did reached the ears of the emperors of Delhi, and the great Akbar granted him by sannad all the tract round Rajoa, now comprised in the Rajoa estates. He married a Khokhar's daughter. The power and influence of the family steadily increased. The Syuds were never defeated before they suffered a reverse at the hands of Walidád. The story tells us that they stole Walidád's camels, and that Walidád punished them for not restoring them. The Syuds rendered good service in the Multán campaign, and were engaged in much sharp fighting with Narayan Singh round Chiniot, in which they lost several men. They were fully rewarded by the British Government. A claim set up by them to a kind of *istimrárt* tenure at a fixed revenue of Rs. 1,200 on their numerous villages was ruled to be unfounded, and was disregarded at this Settlement. The present heads of the family are Haidar Sháh and Bahádar Sháh, between whom a bitter enmity exists. Fattéh Daryá, who holds more than $\frac{1}{4}$ ths of the Rajoa property, is a zaildar and lives at Kot Amír Sháh. The Syuds, with the exception of Bahádar Sháh, are a thriftless, extravagant, careless lot of men and excessively embarrassed by debt. Bahádar Sháh is rather economical and has saved money.

37. Another independent Chief of Syud extraction ruled in what is now known as the Sháh Jíwanailáká. This Syud family is The Latífpur Syuds known as the Sháh Jíwanailáká. This Syud family is descendants of Fir Fattéh not the same as that of Sháh Jíwana, though their Khán. villages adjoin. The family at some period before the reign of Walidád ruled over a large tract of country. Their only important chief was Latíf Sháh, who was a Syud of Uch Syud Jallál in Baháwalpúr. He first settled at Alipúr on the Chenáb, and thence migrated to Bhambrálá where he founded a small state. The boundaries of the Syud's rule were the Chenáb and the countries of the Chiefs of Massan and Bhairo on the south and west, and Keráná and the Ríhán country on the east.

Latíf Sháh, proprietor and lambardar of village Latíf Sháh, is a descendant of his namesake. The family are now well-to-do zemindars.

38. The Khokhars of Nadhaghar and Bhairo were an influential clan in the early days of Jhang history. Besides the two The Khokhars. villages above mentioned, the tribe owns many others close by in the north of the district near Kot Isá Sháh. The Khokhars* derive their descent from Kútub, a descendant of Ali the son-in-law of the prophet. They apparently came from Arabia in the train of the first Mahomedan invaders. Nadhaghar was founded by one Saláh Khán. The tribe became independent at the breaking up of the Moghul empire. The limits of the Khokhar supremacy

* *Notes.*—The Khokhars are, I am inclined to believe, a branch of the Rájpút tribe. The above information has been taken from the Sháhpur Settlement Report.—E. B. S.

were—to the west the Jhelam, to the south Kot Khān and Katiānwāl, to the east the country of the Syud Chief Shāh Lātīf, to the north that of the Beloches Sāiwāl. The Khokhars were in a state of chronic warfare with the Beloches and Walidād took advantage of a Beloch victory to subdue them and annex the country. Subsequently they revolted and aided by their old enemies the Beloches, gave battle to Walidād's lieutenant, an Aliānā Syāl, by name Sharīf Khān. Sharīf Khān defeated the insurgents, and was given the lands of Kot Khān in jāghir, where Kotla Sharifā exists to this day. The Khokhars are among the best of the Jhang zemindars. They are hardworking, thrifty agriculturists, not given to crime. The lambardārs of Bhairo and Lau are their chief men.

39. The chief of Massan was a Syāl who ruled over the Vichand. The town of that name was founded by Rāi Massan of the Sāhibāna branch of the Syāls. Nothing is known of the family except that Walidād subdued them. There are now no representatives of any standing.

40. The Syuds of Uch are the last of the clans of Jhang who can be said to have ever been semi-independent. The family is of recent date. Their founder was a Belot Syud, Gul Imām, who wandered across the Thal from his native village on the Indus in the time of Inayatulla Khān. He first settled at Rodu Sultān, a village in the Kachi, where another fakīr of that name had his abode. This fakīr became his disciple. The Belot fakīr then took up his residence on one of the high sandhills of the Thal called Sammū-bhir, and commenced to work miracles. In a few years he had obtained so much influence in the neighbourhood that he commenced to construct the Uch fort. Inayatulla is said to have assisted and to have worked as a bricklayer. He certainly held the fakīr in great esteem, as he made over to him a number of villages in jāghir. Gul Imām seems to have been a man of much ability and large ideas. Besides the three castles in Uch called Chāndnā, Hazārā and Sonī, he built forts at Siddha Dolowāna, Māchiwāl, and Sat. The ruins of the six forts built on the edge of the Thal remain still and attest the enterprise of the fakīr. They must have been places of much strength in the 18th century. The most important of Gul Imām's public works was the construction of the Uch canal, leaving the river Jhelam close under Māchiwāl and tailing off in Uch. The canal was one of those big ditches that are so extremely useful. Most of the water was monopolised by the fakīr for irrigating Uch, though the excavation was effected by the forced labour of all the country through which it passed. The canal ceased to run about the end of the 18th century, after flowing for some sixty years. Zemindars are inveterate praisers of the days gone by, and love to dilate upon the wonderful prosperity of Uch when irrigated by the canal, how there was a lake under the gates of the fort and town (that are built on the edge of Thal), on which the fakīr and his councillors took their pleasure in a boat, how the trees flourished and how every well had its two or three acres of rice. Verily the glory is departed from Uch. A tumble-down fort uninhabited and in ruins, encircled by a straggling poverty-stricken village looks down upon a strip of country on whose barren soils tainted by salts and hard as iron,

the only spontaneous growths are a few jál bushes. The few wells are of the most wretched description, and their assessment is the lowest in the Kachi. The few episodes in which the Uch Syuds have played any historical part have been already mentioned in my account of the Syál chiefs. The semi-independence of the Syuds lasted as long as that of the Syáls and succumbed to the advance of Ranjít Singh. The head of the family is now a boy of 15 or 16 years old. The family has gone down in the world. They hold a jaghir worth some Rs. 800, but the property has been shamelessly squandered, and the income of the family estates now hardly suffices to pay the interest on the family debts. An attempt is now being made to extricate the Fakír Sáhíb, as he is always called, from his money difficulties, and I trust it may prove successful.

41. The Riháns were in old days the rulers of the Kálowál iláká, and Izzat Baksh was Walidád's governor, but Kálowál only formed portion of the Syál kingdom for a very short period, and not much interest attaches to the family. Yará is the head of the family, a lambardar of several villages and overwhelmed with debt. There are only three Rihán villages in the district.

42. It is necessary now to return to the Syáls, and give some account of the principal branches of the tribe. The different families and clans of the Syáls are countless. I shall only enumerate the more important. The royal family is the Jallál Khánáná. Among the others are the Rajbáná, Bharwáná, Kamláná, Chuchkáná, Máhni, Sargáná, Sarbáná, Janjiáná, Ali Khánáná, Dheráj, Chelá, Perowáná, Sajoke, Sáhjar, Fakír Syál, Doulatáná, Umráná, Khánúwáná, Dádúwáná, Jabowáná, Hasnáná, Liwáná, and Lakhnáná families. It is fairly safe to assume that any tribe whose name ends in 'ána' is of Syál extraction.

43. The Rajbáná family is one of the most important, both in point of numbers and in men of note. The Rajbánás are located in Shorkot. Mad and Badh Rajbána, Garh Máhárájá, Ranjít Kot, Ahmadpúr, many small villages around Kunal Khokhar, and others under the Thal, all belong to them. The family supplies many leading men,—Nasrat of Ahmadpúr, Núr of Ranjít Kot, Varyám of Garh Máhárájá, Dád of Badh Rajbáná, all zaildars, Kásim and Ahmad, lambardars of Mad &c. The tribe is descended from Bhopti, 3rd son of Kohlí, whose descendant in the 10th generation, Rajjab, gave his name to the tribe. They were originally settled at Almán in the Kachi. Rajjab died at the time of Lál Khán Syál. His tomb is at Wasú Astáná. The Rajbánás then moved southwards, and settled in the northern portion of the tract which they now hold. The clan seems to have been a turbulent one. Fighting went on continually between them and the Beloches, Traggars, Miráls and others. The Beloches were driven away from the Chenáb and the Rajbánás extended their possessions as far as Ahmadpúr. This village originally belonged to a tribe of But Jats. The tribe next commenced to raid into the territory of the Jhang Khán, Inayatulla, but subsequently aided him in his contest with the Multán Nawáb and Garh Máhárájá (built by Máhárájá Koura Mal) was granted to them. Kásim now became the tribal leader, and in return for assistance Súltán

Mahmúd the Jhang chief granted him the Garh Máharájá iláká in jaghir. He was succeeded by Rajjab, the most able of all the Rajbánás. His first success was the repulse of an expedition sent against him by Sáhib Khán. He built several forts, among others the one still in existence at Garh Máharájá. Among Rajjab's other deeds are mentioned his co-operation with Khán Beg Khán Tiwáná, and others in an expedition against his brother Khán Mahammad Tiwáná. He shook off the authority of Muzaffar Khán, the Nawáb of Múltán, and was defeated by him about 1811. I have also heard that it was at Rajjab's instigation that Ahmad Khán the Jhang chief was seized and imprisoned by Ranjít Singh on his way back from Múltán. Rajjab lived in retirement on a liberal jaghir during his old age, Garh Máharájá and the adjoining villages being under a Sikh Kardár. His son Khán Beg rendered important assistance to Sir Herbert Edwardes in the Múltán campaign. Khán Beg died a few years ago, and his son Varyám is now the head of the family. He holds a small pension, half of what his father held.

44. The Bharwánás trace their descent to Bharo, sixth in descent from Máhni. They were first settled in the Kachi, somewhere to the north of Kot Maldeo. The Saliáná Bharwánás were the most powerful branch, and were as a rule hostile to the ruling Kháns of Jhang. At the time of Walidád the Bharwánás resided chiefly in the interior of the Bár. Apparently they did not reside in the Kachi for any length of time. Their settlements nearer the river were at Dhúin Mahomed and Káim Bharwáná. Walidád, among other acts, put the leader of the Bharwánás, Bákar, in prison. At that time the head-quarters of the Bharwánás were at Rahna Jalluwáná in the Bár to the east of Jhang. Walidád attacked this village, but was defeated by the Bharwánás aided by the Káthiás. Then the victorious tribes fell out among themselves about cattle grazing, and the Káthiás were driven off to the south by the Bharwánás. This clan never seems to have been happy unless it was fighting with some tribe or other. Raids and reprisals between the Bharwánás on the one side and the Fathiáná and Tahráná Syáls on the Rávi and the Kharráls on the other, were of daily occurrence. In the Bár, east of Roránwáli, and also, I am told, to the north, there are some masonry dome-roofed buildings, evidently of considerable antiquity, that mark the place where Rind Beloches fell in battle with the Bharwánás. According to local traditions, these memorials date from the time when the Bharwánás first came across the Chenáb. The Sándal Bár was then occupied by the Rind Beloches, who supported themselves by camel breeding. The advent of the Bharwánás was followed by quarrels about grazing rights. Hostilities broke out, but the Bharwánás were the stronger, and drove the Beloches out of the Bár. There are some few Beloches even now in the Bár, but they are dependents of the Bharwánás. The two principal settlements of the Bharwánás are at Mukhiáná, Satiána and Sultánpúr north of Jhang, and at Káim Bharwáná, and the adjoining villages to the south. The headmen are Mohmand and Inayat, both well known characters to the north, and Núr Mahomed and Mahomed to the south. The Bharwánás are bad agriculturists, and prefer a pastoral life to following the plough and sitting behind the well bullocks. They are inclined to be extravagant like most other Syáls, and a few of them are considerably in debt. Jalla was a Bharwáná of note during the time of Sáwan Mal, and a personal friend of the

Diwán's. The Bharwánás practised infanticide to a large extent in old days. The custom is said to date from the tragic adventures of Sáhíbá and Mirzá. The Bharwánás took their wives from the daughters of the Siprás, who curiously are found associated with the Bharwánás in almost all their villages. In some cases they are full proprietors, in other only taraddadkárs, and sometimes merely tenants-at-will.

45. The Kamlánás are an important Syál clan in the Shorkot tahsil. Their head-quarters are at Jallálpúr Kamláná. Kamál, 12th in descent from Bharmi, had three sons from whom are descended the Sargánás, the Perowánás and the Kamlánás. The Kamlánás at first were residents in the country now occupied by the villages of Májhi Sultán and Chayanwálla, and the intervening tract. They were driven out by the Bharwánás and retreated southwards to Jallálpúr, where they are still located. A Kamláná graveyard is still to be seen at Májhi Sultán. The leading men now are Sujáwál the zaildar, and Hashmat his enemy.

46. The Chúchkánás are the descendants of Chúchak, who was the Syál chief next before Mal Khán, his nephew, who founded Jhang. The are now located on either side of the Chenáb north of Jhang. The chief villages are Kuriánwálla on the left, and Pipalwálla on the right bank. Murád, the zaildar, lives at Thattah Mahla, and is their leader.

47. The Máhni clan has now almost died out. In former days they were independent, and the head-quarters of their chief was at Khíva. Máhni was the son of Syál. Khíva was founded by the leader, who gave it his name, a descendant from Syál in the 12th generation. Local tradition states the Chenáb was then flowing east of Khíva, but this is evidently wrong. The Chenáb did no doubt once flow under the high bank of the Bár, about 16 miles south east of Khíva, but this must have been ages before. When Khíva was founded, the country to the north was held by Marrals and Chaddhars. At first the Máhni remained on good terms with their neighbours, but as they increased in strength they began to drive them back. Khánúwána was founded in their lands to the north of Khíva. The first chief of Khíva really deserving the name was Sáhíb Khán. The rule of the Khíva chief in his high and palmy days extended from Bhowáná to Chountálá. The independence of the Máhni was extinguished by Walidád. From that time the clan appears to have rapidly declined in influence and numbers. There are now no Máhni in Khíva. The lands of the village were granted by Sáwan Mal to Bákar, a leading man among the Bharwánás, whose family now holds it. Popular tradition attributes the decay of the Máhni clan to the curse of a fákír who lived at Chountálá. This fakir had one fair daughter, who being of somewhat weak intellect, wandered about the country in a state of nudity. In her wanderings she strayed into Khíva, whence the Máhni chief drove her out with contumely, thinking no doubt that she was no better than she ought to be. This was resented by her father, who cursed the clan in the following words, addressing himself to the sacred tree near his abode :—

Chountáliyá gharmáliyá,
Ithón Khichí Máhni Kad :
Kahr Allah dá máriyá,
Na rahene vad.

48. The Miráls are Syáls who own several villages on the Ráví, and a little property on the lower Chenáb. I only mention the clan as it was originally located near Roránwáli, and was driven thence by the Bharwánás. Miráli was the sixth in descent from Bharmi.

49. The Kathiás, who are one of the more important tribes in the Montgomery district, hold a considerable amount of property in the Shorkot tahsil. For speculation as to the origin of this tribe, pp. 33-37, Archaeological Survey of India, Volume II, should be consulted. A note on the tribe will be also found at p. 45 of the Montgomery Settlement Report. They are said to have gained a footing in the Jhang district in the following way. In the days of Inayatulla Khán the Kamlánás, being displeased with his treatment of them, left their lands at Jallálpúr and went down south and settled in the country of the Múltán Nawáb. Inayatulla sent messengers praying them to return, but they sent word back that they would only return at the Khán's personal request. The Khán accordingly set out from Jhang. Hearing of this the Múltán Nawáb, already enraged at the recent annexation of Islámábád, laid an ambuscade for the Syál chief. Inayatulla obtained news of the design, and calling together an army of the Kathiás, Rajbánás, and other Syáls, retreated northwards. The defeat of the Múltán Nawáb has been already noticed. The Kathiás displayed the most brilliant gallantry in the battle, and the grateful Inayatulla bestowed upon them the lands that they now hold in this district. Previously they lived on the Ráví and in the lower part of the Sándal Bár. The Bharwánás, now resident at Kaim were the former residents. The Kathiás still maintain their character for being a fine, manly, handsome race. Fázil, their old leader, died two years ago, and the tribe is not doing so well as it did in his time. He managed to extinguish all internal feuds, or, at all events, to prevent their swelling to any injurious extent. Since his death the leadership has devolved upon his brother Ibráhím, a man of little ability or force of will.

50. Besides the Syáls the only true Rájpút tribes in the district are the Chaddhars, the Bhattis, and the Kharrals. In three villages only do the Kharrals hold property, all in the Chiniot tahsil, and they acquired their lands chiefly in the dowry of their wives.

51. The Chaddhars with their sub-families of Jappas, Rajokes, Sajjankes, Kangars, &c., are settled in the country between Thattehwará Mahomed Shah, and Sáhmal beyond Sajanke on the left bank of the Chenáb in the lower portion of the Chiniot tahsil. Their origin is obscure. They claim to be descended from Rájá Tus Suraj Bansi. They left their home in Rájpútáná during the time of Mahomed Ghorí, and proceeded first to Baháwalpúr. They were converted to Mahomedanism by Sher Sháh of Uch. From Baháwalpúr they came to Jhang, and settled in the lands beyond the country of the Máhni chief of Khíva. The head family is that of Tahli Mangíní, represented by Fattéh Khán, a zaildar. The Chaddhars of Tájá Berwálla are an old but decayed family. The Jappas are represented by a zaildar Patháná of Bhowáná,

and the Kangars by Ghous of Kúrk. The Chaddhars are good agriculturists, and less given to cattle theft than their neighbours the Harrals and Syáls.

52. The Bhattis hold a considerable tract of country, called Bhattiora in local phrase, between the Sháh Jíwana villages on the west and the Lálí country on the east. With the exception of three villages the tract is in the Chiniot tahsil north of the Chenáb. The principal villages are Ghoriwálla, Kot Sultán, and Barrána. The origin of this tribe is discussed at pp. 19-22 of the Archaeological Survey of India, Vol. II. The tribal tradition is that they emigrated from Bhatnir in Rájputáná. Their first settlement in this district was at Jandmálí on the right bank of the Jhelam, not many miles from the Sháhpúr boundary. They migrated thence to the country which they now hold, over which the Syud chief Latíf Sháh then ruled. The Bhattis are a fine race of men, industrious agriculturists, hardly at all in debt, good horse breeders, and very fond of sport. They do very little cattle-lifting, but are much addicted to carrying off each other's wives. Sirdára of Kot Sultán, Choughata of Barrána are the Bhatti zaildars and among the most influential men of the tribe. The tribe owns only one village on the river, all the rest are in the Utár.

53. There are a considerable number of Beloches in the district, but with one or two exceptions, all their villages lie to the west of the Chenáb. Above Kot Khán, the old limit of the Syál country, the Beloch villages are numerous on both sides the Jhelam, but below on the left bank there is not, I think, a single Beloch village properly so called. They are said to have settled in the district before the Syáls. Baber in his memoirs mentions that there was a colony of Beloches in the countries of Bhera and Khusháb. This was in 1519 A. D., and it must have taken the Beloches some time to spread east as far as Bhera. The tribal tradition is that the Beloches first come into this part of the Punjab in the reign of Sháh Hussén, the Langa ruler of Múltán. This was early in the 15th century, and after the arrival of the Syáls. But, on the other hand, we have undoubted evidence that the Sándal Bár east and south of Jhang was held by Rind Beloches before the Bharwáná Syáls, and the Beloches were only driven out after severe fighting. The Beloch head-quarters were at Mírpúr near the Ráví. Again west of the lower Chenáb the country along the banks of the river was certainly occupied by Beloches before the Rajbáná Syáls pushed their way down to Ahmádpúr. In fact the Beloches seem to have been in force and to have strenuously resisted the Syál advance. Possibly, however, the date generally accepted of the arrival of the Syáls may be wrong, or it may have taken the Syáls longer to spread over the country than is generally supposed, but at all events it seems to be satisfactorily established that the Beloches were holding the southern portion of the Sándal Bár and the country west of the Chenáb before the Syáls. The Beloches in this district never attained any importance. They have furnished no chief. Among them are to be found representatives of almost every clan and tribe. They possess no distinctive moral or physical features distinguishing them from other tribes; they are good agriculturists though not very industrious. They are not addicted much to cattle theft. Among their leading men are Mahomed Khán Gádi, Sultán Khán of Mári, Ghulám Haidar of Kot Shákir, Sher Khán of Búla.

54. The Gilotars are located between the Nissowánás and the Chenáb. The Gilotars. the northern portion of Chiniot adjoining the Sháhpúr district. They have no trustworthy traditions as to their origin. Their location in this part of the district is of comparatively recent origin. Several of their villages were grants from Sáwan Mal. They are a curious mixture of good and bad qualities, first rate agriculturists and irreclaimable cattle-lifters. It is in their villages only that sugar-cane and maize are largely grown. Ismail Gilotar of Gandlanwáli and Murád of Bej Mal are their leaders.

55. The Kokárás or Nekokárás claim to be a branch of the Háshul Kuraishis, but there is some doubt as to the fact. Kokárás. Shekh Nasiruddin came to Babáwalpúr 450 years ago, and founded a village there called Shekh Wáhan. His family became followers of the Syad of Uch in the same country. The family increased and multiplied, and the members began to emigrate northwards to Jhang, Gájrúwála and other districts. There are Kokárás in all three tahsils in this district, and all claim to be descended from the same ancestor.

56. The Nissowánás inhabit the northern corner of the Chiniot tahsil between the Lális, Gilotars and the Sháhpúr boundary. The Nissowánás. They claim to be a branch of the Khokhars. In the Sháhpúr Settlement Report they are described as "notorious for their thieving propensities and generally lawless character." They still retain these qualities in a softened degree. They are a prosperous thriving clan, rich in flocks and herds, with scarcely any debts. Rájá of Kándiwál, Bákar of Babrána, Mehra of Lole, are the leading men.

57. West of the Nissowáná country along the edge of the Bár as far as the Bhatti villages, come the Lális who have a fabulous origin in the plains of Khorassan. The head men are Rájá, Mahomda and Ghulám, all zaildars. Lálián is their largest village. The Lális are not a very fine or spirited race of men, and differ both from the Bhattis and Nissowánás in this respect. They are mostly in debt, though there are one or two notable exceptions. They are not very first class farmers, and prefer grazing their cattle round a strip of baráni cultivation in the Keráná Bár to anything else.

58. The Harrals are another tribe holding villages in the Chiniot tahsil only. From Murádwála to Sáike, both on the left bank of the Chenáb, their villages are thickly studded along the bank of the river. They are said to have settled here during the rule of the Moghul emperors, but I should be inclined to give their coming an earlier date. Tradition makes them a branch of the Ahirs. They are the worst thieves in the district, except perhaps the Gilotars, and bad cultivators. They own great numbers of horned cattle and sheep and goats, and pasture them in the Keárná and the Sándal Bár alike. Sujáwal and Vasáwa, zaildars, Sukha of Murádwála and Bálá of Saike, are the leading men of the tribe.

59. The Marrals at the present time do not own a single village, yet in past times they must have been an important tribe, for we constantly hear of them in the local lore. They claim to be Rájputa, Cháháns of the Súrjabsani race, and to have settled at Thatta Wára beyond Khíva in the Chiniot tahsil during the reign of the Emperor. The Sháh Jíwana legend makes them the proprietors of the lands where Sháh Jíwana now stands. Probably they occupied the tract between Khíva Syáls and the Chaddhars on the left bank, and also some lands on the right bank of the Chenáb. A few families still live in Marraiwálla, but as hereditary tenants only. They are a fine bold-looking set of men, have however a bad reputation for cattle-lifting, and are not very desirable tenants. The cause of their decay is not well known.

60. The histories of the Syuds of Uch and Rajoa have already been given. It remains to notice the other Syuds, viz., the Miscellaneous Syuds. Sháh Jíwanáná and the Shekh Sulemáná and other branches of the Bukhári family; the Mashhadi, the Ghílání, and Bákrí families. The Sháh Jíwanáná are the descendants of Sháh Jíwana, whose shrine is at the village of the same name. Many of the villages round are owned by this family, but Latíf Sháh and Hassan Sháh of Kariwálla do not belong to it, though they are members of the Bukhári branch. The Shekh Sulemáná Syuds reside at Thatteh Bála Rájá west of Chiniot, at Chiniot itself, and several villages east of the town. Their followers are exceedingly numerous and their income from offerings very large. They are careless landlords, addicted to intoxicating drinks and drugs, and not very estimable characters. The other Syuds hold so few villages as to need no mention.

61. The Akeras are Jats holding a small tract of country on both sides of the Jhelam, just above Kot Khán, the limit of the old Syál rule. Their ancestor Khizr is said to have acquired the land by grant from Walidád Khán, in whose service he was for some time employed. They are thrifty and industrious zemindars, and breed a very good wiry little horse, something like the Beloch in shape. The headmen are with one exception well off. Sabr and Hashmat are the two principal men of the tribe.

The Dabs are Jats, and own the large village of Dab Kalán, with a few others adjoining in Shorkot. They are good agriculturists. Bahádur the zaildar is their leader.

The Jútás are also Jats in spite of their brand-new pedigree table, that makes them out to be the descendants of one Jítá, a Manás Rájput, and narrates that they were originally settled in Kashmir territory near Jammú, and migrated to Jhang in the days of Walidád and Inayatulla. They hold two large villages and shares in several others. As agriculturists they are industrious, but retain a *penchant* for cattle lifting. Umrá of Alayár Jútá is their head, a straightforward, honest zaildar, who though somewhat porcine in his obstinacy, can be trusted more than most people.

The Jhandírs hold a few villages in the extreme south of Shorkot on the right bank of the Chenáb. Their name is said to be derived from *jhanda*, a

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58. The Harrals are another tribe holding villages in the Chiniot tahsil only. From Murádwálla to Sáike, both on the left bank of the Chenáb, their villages are thickly studded along the bank of the river. They are said to have settled here during the rule of the Moghul emperors, but I should be inclined to give their coming an earlier date. Tradition makes them a branch of the Ahirs. They are the worst thieves in the district, except perhaps the Gilotars, and bad cultivators. They own great numbers of horned cattle and sheep and goats, and pasture them in the Keárná and the Sándal Bár alike. Sujáwal and Vasáwa, zaildars, Sukha of Murádwálla and Bálá of Saike, are the leading men of the tribe.

59. The Marrals at the present time do not own a single village, yet in

The Marrals.

past times they must have been an important tribe, for we constantly hear of them in the local lore. They claim to be Rájput, Cháhans of the Súrajbansi race, and to have settled at Thatta Wára beyond Khíva in the Chiniot tahsil during the reign of Akbar. The Sháh Jíwana legend makes them the proprietors of the lands where Sháh Jíwana now stands. Probably they occupied the tract between the Khíva Syáls and the Chaddhars on the left bank, and also some lands on the right bank of the Chenáb. A few families still live in Marralwálla, but are hereditary tenants only. They are a fine bold-looking set of men, have rather a bad reputation for cattle-lifting, and are not very desirable tenants. The cause of their decay is not well known.

60. The histories of the Syuds of Uch and Rajoa have already been

Miscellaneous Syuds.

given. It remains to notice the other Syuds, viz., the Sháh Jíwanána and the Shekh Sulemáná and other branches of the Bukhári family; the Mashhadi, the Ghílání, and Bákri families. The Sháh Jíwanána are the descendants of Sháh Jíwana, whose shrine is at the village of the same name. Many of the villages round are owned by this family, but Látíf Sháh and Hassan Sháh of Kariwalla do not belong to it, though they are members of the Bukhári branch. The Shekh Sulemáná Syuds reside at Thatteh Bála Rájá west of Chiniot, at Chiniot itself, and several villages east of the town. Their followers are exceedingly numerous and their income from offerings very large. They are careless landlords, addicted to intoxicating drinks and drugs, and not very estimable characters. The other Syuds hold so few villages as to need no mention.

61. The Akeras are Jats holding a small tract of country on both sides

Miscellaneous Jats.

the Jhelam, just above Kot Khán, the limit of the old Syál rule. Their ancestor Khizr is said to have acquired the land by grant from Walidád Khán, in whose service he was for some time employed. They are thrifty and industrious zemindars, and breed a very good wiry little horse, something like the Beloch in shape. The headmen are with one exception well off. Sabr and Hashmat are the two principal men of the tribe.

The Dabs are Jats, and own the large village of Dab Kalán, with a few others adjoining in Shorkot. They are good agriculturists. Bahádur the zaildar is their leader.

The Jútás are also Jats in spite of their brand-new pedigree table, that makes them out to be the descendants of one Jítá, a Manás Rájput, and narrates that they were originally settled in Kashmir territory near Jammú, and migrated to Jhang in the days of Walidád and Inayatulla. They hold two large villages and shares in several others. As agriculturists they are industrious, but retain a *penchant* for cattle lifting. Úmrá of Alayár Jútá is their head, a straightforward, honest zaildar, who though somewhat porcine in his obstinacy, can be trusted more than most people.

The Jhandírs hold a few villages in the extreme south of Shorkot on the right bank of the Chenáb. Their name is said to be derived from *jhanda*, a

standard, as their ancestor had been a standard bearer to the prophet or some of his descendants.

This would give them a western origin, but I fear the story is somewhat mythological. Though not openly professing to be religious directors, there is a certain odour of sanctity about the tribe. Most of the members can read and write. The droning monotone of Korán reading is always heard in their villages, and the elder members affect a certain clerical tone in their dress and appearance. A favourite aphorism "*Dárhí Shekhán dī, Kam Shaitánádá*" does not apply. The tribe is particularly free from ill deeds of every description.

62. In the Shorkot tahsil the place occupied by Syuds in Jhang and Chiniot is taken by Koraishis. The more important The Koraishis. Koraishi families of Havelí Bahádar Sháh, and Pír Abdúl Rahmán, are not recognised as genuine by the true Háshimí Koraishis, the descendants of the celebrated Mahomedan saint Makdúm Báhá-ud-dín Tikiriya. For an account of the family pp. 490-494 'Panjáb Chiefs' should be consulted. The Háshimí Koraishis are represented in this district at Hassú Balel in Shorkot and at Dosa and Sháh Shakúr in Jhang. Their character does not differ from that of other holy tribes. Makdúm Jallal of Hassú Balel is a man of large property and influence, and a zaildar.

63. Among other tribes holding land in proprietary right in the district Other tribes. are Mangans, Siprás, Laks, Asis, Mathramas, and many others, but all too insignificant to merit separate notice.

64. The trading classes are recruited almost entirely from Aroras, The trading classes. Khattris, and Khojas. Only a few Brahmins are engaged in business. The Aroras are the most numerous, and are divided into an infinity of clans. They are the chief money lenders and capitalists of the district, and also the chief creditors of the agriculturists and mortgagees of their lands. Many hold land in proprietorship. The Aroras have the reputation of being a most industrious, energetic, and laborious tribe. A local proverb embodies the idea,—"*Badhí lak Arorián, munah koh Lahor.*" When an Arora has girded up his loins he makes the distance to Lahore only three quarters of a kôs. According to the proverb a Karár is not so merciless in his dealings with the zemindars as a Khoja,—"*Karár dandáli Khoja phahora,*" meaning that a Karár like a toothed dragrake leaves something behind, but a Khoja like a muck-scraper leaves nothing, is a favourite simile. They are invariably termed Karárs, which is also used to denominate the whole Hindu population. Karár is not a complimentary appellation. Meeting a Gondal tenant-at-will once near Jhang I mentioned that his tribesmen in Gujrát were great thieves. 'Ah, yes,' he replied, evidently taking what I had said as very complimentary, 'but here I don't do anything of the sort; I have not got as much spirit as a Karár.' The term is often used by Khattris and Brahmins towards their co-religionists the Arorás, but hardly even by an Arorá of them. Except in the large villages and the towns, there are but few Khattris in the district. The principal clans are Kattiáls, Kapúrs, Khannas, Marotras, Saiguls, Maggús, Mahtas, Dhawans, and Talwárs. All are engaged

in business, except the Khannas who own the village of Kot Maldeo, and prefer Government service to any other employment. There are proportionately more Khatris at Chiniot than elsewhere. At Chiniot too, is a large colony of Khojas, many of whom are traders on a large scale, with branches and correspondents at Calcutta and Bombay. They are converts from Hinduism, as is clearly indicated by the fact that many of their family divisions bear the same name as those of the Arorás and Khatris. The date of their conversion is put at 400 Hijra, and their first settlements were at Thatteh Wára and Dáwar, both villages in the Chiniot tahsil. They migrated to Chiniot about 120 years ago in Sambat 1816, which is said to have been at the time held by the Bhangi Sikhs. There they appear to have thriven, and to have been entrusted with posts of importance. When Ranjít Sing took Chiniot Mián Sáltán a Khojah was over the citadel, and though the Bhangi forces had been defeated outside the town and the Bhangi leader taken prisoner, he held out stoutly and refused to desert his charge or open the fort except at the order of his master. Ranjít Singh, the story goes, was so pleased with his stubborn fidelity, that he made him a grant of Kálowál and Changráwála, formerly the property of Riháns, the greater portion of which is held by Khojahs to this day. There are no Khojahs in Jhang, but many have settled in Maghiána, and are among the wealthiest and most public spirited of the residents.

The towns.

65. The history of the town of Jhang has been already narrated and a separate notice is unnecessary.

Chiniot.

Chiniot is doubtless a town of considerable antiquity, but little is known about its origin and history. It is said to have been founded by a king's daughter, Chandan, who was accustomed to hunt in man's attire. While on one of her expeditions she was so charmed with the site,—hill, river and plain, that she ordered a town to be built on the spot. From her name the town was first called Chandniot. In old deeds the name is always spelled thus. The town is built under and on the lower slope of a low hill that is perfectly bare of all vegetation. In the hot weather the heat thrown out from this mass of rock is almost intolerable. The town is divided into three blocks of houses, one lying close under the hill, the second towards the tahsil, and the third to the west. The latter, though included in the town, is always spoken of as the 'Thatteh,' and is more a separate collection of houses round the tomb of Pír Shekh Ismail, than an integrate part of the town. Most of the houses are made of burnt brick, and the masonry is excellent. This solid well-built aspect of the houses is what strikes a visitor more than anything else. On the outskirts of the town a number of houses are in a dilapidated state, but there is no doubt that the town which suffered severely from the Durání inroads and from constant sieges during the last half of the 18th century that witnessed the struggles between the Syáls, Bhangi Sirdárs and the Sukarchákeia Misl, headed by Máhan Singh and his son the Mahárája, and again in 1848 from the occupation of Narayan Singh, is now rapidly recovering. The most prosperous days of Chiniot were during the reign of Shah Jehán, when Nawáb Sádúlla Khán Tahím was the governor. It was he who built the Sháhi Musjid, an exceed-

ingly handsome edifice of hewn stone obtained from the hills near Chiniot. The pillars that support the western portion of the mosque underneath the domes are singularly chaste and elegant in design. Some repairs and restorations have been recently made that, to say the least, are in very doubtful taste, and are certainly utterly out of harmony with the character of the building. Another vestige of the Tahims' magnificence is to be found in the remains of an elephant house. Now the Tahims are represented by a Deputy Inspector of Police, a couple of Patwáris, and one or two other families resident at Chiniot. The decay of families that years ago were rulers in the land is in this district most remarkable. In 1868 the population of the town was 11,477 souls. The Mahomedans were double the number of the Hindus. A large colony of Khojahs resides here. The townspeople have an unenviable character for forgery, litigiousness, false evidence, and anonymous petitioning. Any old deed that comes out of Chiniot should be looked upon with the greatest suspicion.

The couplet,—

"Shor Shoron, Kúr Lahoron Jhagrá Chanioton,
Je píú putr de ute chuglí máre Dípálpúr de Koton,"

fits Chiniot admirably. The artificers of Chiniot,—the masons, carpenters, wood-carvers and painters, are excellent workmen. The architect of the golden temple at Amritsar was a Chiniot mason, and the head mason now attached to the building is another. He holds a small máfi grant as a reward for his services.

Shorkot, though shorn of its former importance, hardly deserves to be now termed a 'pauper warren,' whatever its condition was when Mr. Monckton wrote his report. The District Gazetteer, as it at present stands, (and most sorely does it need other corrections,) states,—“The present town stands upon a high mound of ruins, surrounded with a wall of large sized bricks, and measuring about 2,000 feet by 1,000 feet in size.” This is altogether wrong. The town is not on the high mound at all, but lies beneath it on a small mound that slopes away northwards to the level of the surrounding country. There are only a few squalid huts belonging to Kamíns, weavers, and the poorest inhabitants, on the top of the Bhír, as the big mound is termed. To the east and south of the town and mound lies a hollow of considerable area, evidently an excavation by human hands and the spot whence the earth of which the mound is composed was drawn. To an observer possessing no special antiquarian knowledge whatever, the mound appears to have been the citadel of the old town. The abruptness with which the mound rises from the ground, and the existence of remains of what appear to have been bastion towers at intervals round the mound, support this view. The old town must have sloped away from the fort northwards. For the ancient history of the town Cunningham's 'Ancient Geography,' p. 205, should be consulted. The name of the town is attributed to various sources, to a fabulous Rájá Shor, to the saline character of the ground, to a fierce soldier of Islám, Tájúddín Shorí, and to the quarrelsome disposition of the inhabitants. In spite of the couplet quoted above, which fits the Shorkot people as appropriately as it does those of Chiniot, some individual probably gave his name to the place. Tájúddín Shorí came to the Punjab in the van of the

Mahomedan invasion as a follower of Pír Ghází who fell a martyr on the field of battle in combat with the infidels who then held Shorkot. The town was taken, and derived its present name from Tájúddin's surname. Pír Ghází's tomb is still to be seen close by Shorkot in a wood of aged farásh and jál trees. The town has but a small population. It is surrounded by groves of date-palms whose fruit is of excellent quality. The proprietors of the lands are of a most miscellaneous character.

Maghiána is now the largest town in the district, and is rapidly supplanting Jhang. I fancy the results of the census of next year, 1881, will show that Maghiána is rapidly increasing while its older neighbour is gradually but surely decaying. At annexation Maghiána was a village, it is now a town with a considerable length of bázár, brick houses, a considerable trade, and every sign of rising importance and prosperity. Its importance dates from the transfer of the sadr station from low land nearer the river and Jhang to its present position.

The remaining so-called towns are only large villages of no importance and not deserving particular mention.

66. The various tribes and clans having now been described and their histories given, it remains for me to abstract the information contained in the Census returns of 1868, and add a few remarks in explanation. Grouped according to religion, the population of the district in 1868 consisted of,—

		Christians,	Muhammadans.	Hindús.	Sikhs,	Others.	TOTAL.
Population	...	18	2,70,819	57,297	2,994	16,899	3,48,027
Percentage	...	...	77.81	16.46	.86	4.86	...

Jhang is an essentially Mahomedan district. The 'others' are put down as Sásnis. The principal tribes into which the population is divided are given below :—

Mahomedan Tribes.

Syuds	5,553	Jats	17,339
Patháns	877	Kharrals	1,669
Beloches	11,352	Káthiás	521
Bhattís	7,049	Gujars	531
Janjuás	783	Khojas	2,374
Syáls	30,801	Miscellaneous {	
Miscellaneous		Mahomedans }	1,82,654
Rájpúts. }	8,565	Total	2,70,668

From what I know of the district I should say that the Káthiás are underestimated ; and it is not very clear how Jats were distinguished from miscellaneous Mahomedans. It is self-evident that the great mass of the cultivators and proprietors, who are known in the district as Jats, are here put down as miscellaneous Mahomedans, and I think wrongly. The Rájput, Synd and Beloch tribes excluded, the cultivating and proprietary body consists almost entirely of a vast number of agricultural tribes, each known by a different name but comprehended within the one universal term Jat. Ethnologically I am not sure of my ground, but if these tribes are not Jats who are they? They are all converted Hindus. Of this there is no doubt, and all are engaged in agriculture or cattle grazing. Some of them are recognised as Jats, and in appearance, custom and traditions they do not differ from their unrecognised brethren. For statistical purposes it would be surely a much more useful and convenient arrangement to class these agriculturists as Jats, though they are not true Jats, whatever they may be, but only ploughmen and cattle graziers.

The Hindus are subdivided thus :—

Hindus and Sikhs.

Brahmins.	Khatris.	Aroras.	Miscellaneous.	Sánsís.
5,112	13,266	39,495	1,807	16,899

The Sánsí return must, I think, be wrong. At present there are not 300 Sánsís in the district. I do not know what persons were included, but there are a great many Chúrás in the Bár who may have been returned as Sánsís. But against this there is the fact that 12,138 Chamárs are given as residents of the district. Arranged according to occupation the figures are,—

Engaged in agriculture or with cattle.

Proprietors.	Tenants.	Labourers and herdsmen.	TOTAL.
38,055	1,19,619	6,975	1,64,649

Non-Agriculturists.

1. Weavers	28,460	11. Barbers	4,718
2. Labourers	28,019	12. Musicians	4,119
3. Shopkeepers	17,256	13. Cotton cleaners	3,866
4. Shoemakers	12,137	14. Village officers	3,679
5. Potters	9,186	15. Merchants	3,560
6. Beggars	9,165	16. Bakers	3,127
7. Sweepers	8,735	17. Washermen	2,951
8. Carpenters	6,070	18. Ropemakers	2,729
9. Letters-out of animals for hire	5,636	19. Blacksmiths	2,594
10. Priests	5,503	20. Goldsmiths	2,270

All these figures are normal, and are not suggestive of any remarks. It is well known that there are a large number of weavers in the district employed in the manufacture of a coarse cloth for export to Affghánistan. In Jhang you find every class and tribe represented among the weavers. Even poor Syáls do not despise the profits to be obtained by throwing the shuttle. I think that in other districts it is unusual to find that any but weavers born and bred, or men of the lowest caste, take to this trade.

In the 1868 census returns, the number of enclosures and houses are given as 17,980 and 74,986, and the average number of persons per enclosure and per house as 19·36 and 4·64. The towns and villages are classified in reference to their population as below :—

Villages the number of whose inhabitants is—

	Less than 200.	From 200 to 500.	From 500 to 1,000.	From 1,000 to 2,000.	From 2,000 to 5,000.	From 5,000 to 10,000.	From 10,000 to 50,000.
Number of villages...	734	228	90	27	7	1	2

67. It is only in the Chiniot tahsil and the better cultivated portions of the other tahsils that all the inhabitants of a village live at one hamlet or village. They prefer living at their separate wells. Down south there are many villages that have no village whatever. Each proprietor lives at his well. The well of the lambardár and perhaps one other will have a small hamlet growing up round it consisting of the huts of the proprietors and his tenants and those of a shopkeeper and a few Kamins. There are hardly any strong solidly-built villages, such as are seen further east. There are four kinds of houses,—

(1). Kothi or Kothri, a square mud house, containing sometimes one and sometimes two rooms, sometimes with a front room "pírah," and sometimes without, the roof is also of mud and flat.

(2). Sáhl, the commonest kind, consists of four mud walls over which a roof of thatch is thrown, supported on an arrangement of beams and rafters that keeps the centre of the thatch highest, and allows the sides to bend down and overlap the side mud walls. The end walls are built up to meet the thatch. The thatch is made of sar grass strengthened by kána bands, and is often in one piece. The thatch is called "chappar," and the beams which support it "pat" and "larra." A new sáhl with the floor sanded and sprinkled with fresh water, is cool and comfortable.

(3). Kúrhá is a cabin of thatch or screens. There are several modes of arranging them. One of the simplest is to take a piece of thatch and prop it up by three sticks, one in the centre and one in the middle of each end. The sides of the thatch fall down on either side to the ground. The one open end is blocked up by a screen, and the other serves as the doorway.

54. The Gilotars are located between the Nissowánás and the Chenáb in the northern portion of Chiniot adjoining the Sháhpúr district. They have no trustworthy traditions as to their origin. Their location in this part of the district is of comparatively recent origin. Several of their villages were grants from Sáwan Mal. They are a curious mixture of good and bad qualities, first rate agriculturists and irreclaimable cattle-lifters. It is in their villages only that sugar-cane and maize are largely grown. Ismail Gilotar of Gandlanwáli and Murád of Bad Mal are their leaders.

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71. The wearing of ornaments is almost entirely confined to the women.

Ornaments. A man is contented with his signet 'cháp,' and perhaps one other ring 'challa,' and an amulet 'bawá-hatá,' also ornamental, tied just above the elbow. As for women's ornaments, their name is legion. I asked for a list, and one containing 72 varieties has been prepared. I shall only mention those worn by almost every 'zemindární. They are 'kangan' a plain bracelet ; 'válán,' earrings ; 'challá,' a plain finger ring ; 'hassí,' a necklet ; 'bawáhatá,' an amulet similar to those worn by men. Nose rings are very seldom worn. I do not think I have seen half a dozen zemindar women wearing them.

72. The food of the nomad population of the Bár is very different from that of the agricultural residents of villages near the rivers. It is estimated that a resident of the Bár consumes only $\frac{1}{3}$ rd the quantity of food grain eaten by the ordinary cultivator. My own opinion is that the proportion is still smaller. One is constantly told that sometimes the grazier for days goes without any food other than milk and substances made from milk. Milk is, it may be almost said, the staple food of the district. The ordinary grazier as often as not, instead of making bread for his evening meal, simply mixes his flour in the milk and warms it over a fire. In the morning he has a draught of butter milk, and later on a small 'chapatti,' and another drink of buttermilk. Milk is usually drunk with the evening meal.

The table below gives the food of an agriculturist for the different months,—

MONTHS.	FOOD.
Chait	Chapatties of barley, peas and wheat flour. Buttermilk with morning and milk with evening meal. Green gram pods and carrots are also eaten.
Baisákh	Wheat chapatties and vegetables.
Jeth	Wheat chapatties, pilú berries, melons, vegetables, buttermilk, and milk as before.
Hár, Siwan, Bahádrón, Assú ...	Wheaten chapatties, melons in Hár, buttermilk and milk as before.
Katik, Magar, Poh, Magh, Phagan	Wheat, jowár, bájrá and maize chapatties. Turnips cooked in milk. Buttermilk and milk as before.

Zemindars have two meals a day, the morning meal from 10 to 11 o'clock, the evening one from 6-30 to 8 at night. The evening meal is taken later in the cold weather than in the hot. The morning meal remains at much the same time all the year round. When the pilú berries are in, only half the ordinary quantity of grain is eaten. When turnips are ready $\frac{1}{4}$ of the usual amount of bread. Well-to-do zemindars live upon wheaten bread, rice and flesh. The Syáls are much given to liquor.

54. The Gilotars are located between the Nissowánás and the Chenáb the northern portion of Chiniot adjoining the Sháhpúr district. They have no trustworthy traditions as to their origin. Their location in this part of the district is of comparatively recent origin. Several of their villages were grants from Sáwan Mal. They are a curious mixture of good and bad qualities, first rate agriculturists and irreclaimable cattle-lifters. It is in their villages only that sugar-cane and maize are largely grown. Ismail Gilotar of Gandlanwáli and Murád of Baháwalpur are their leaders.

55. The Kokárás or Nekokárás claim to be a branch of the Háshim Kuraishis, but there is some doubt as to the fact. Shekh Nasíruddin came to Baháwalpur 450 years ago, and founded a village there called Shekh Wáhan. His family became followers of the Syad of Uch in the same country. The family increased and multiplied, and the members began to emigrate northwards to Jhang, Gájránwála and other districts. There are Kokárás in all three tahsils in this district, and all claim to be descended from the same ancestor.

56. The Nissowánás inhabit the northern corner of the Chiniot tahsil between the Lális, Gilotars and the Sháhpúr boundary. They claim to be a branch of the Khokhars. In the Sháhpúr Settlement Report they are described as "notorious for their thieving propensities and generally lawless character." They still retain these qualities in a softened degree. They are a prosperous thriving clan, rich in flocks and herds, with scarcely any debts. Rájá of Kándiwál, Bákar of Babrána, Mehra of Lole, are the leading men.

57. West of the Nissowáná country along the edge of the Bár as far as the Bhatti villages, come the Lális who have a fabulous origin in the plains of Khorassan. Their head men are Rájá, Mahomda and Ghulám, all zaildars. Lálián is their largest village. The Lális are not a very fine or spirited race of men, and differ both from the Bhattis and Nissowánás in this respect. They are mostly in debt, though there are one or two notable exceptions. They are not very first class farmers, and prefer grazing their cattle round a strip of baráni cultivation in the Keráná Bár to anything else.

58. The Harrals are another tribe holding villages in the Chiniot tahsil only. From Murádwála to Sáike, both on the left bank of the Chenáb, their villages are thickly studded along the bank of the river. They are said to have settled here during the rule of the Moghul emperors, but I should be inclined to give their coming an earlier date. Tradition makes them a branch of the Ahirs. They are the worst thieves in the district, except perhaps the Gilotars, and bad cultivators. They own great numbers of horned cattle and sheep and goats, and pasture them in the Keárná and the Sándal Bár alike. Sujáwal and Vasáwa, zaildars, Sukha of Murádwála and Bála of Sáike, are the leading men of the tribe.

The square measure is,—

1	square karram	...	...	1 sarsái.
9	sarsáis	...	...	1 merla.
20	merlas	...	...	1 kanal.
4	kanals	...	...	1 bigha.
2	bighas	...	...	1 ghomao.

The country karram is some six inches longer than the karram used in the Settlement survey. Otherwise there is no difference in the two measures. In measuring up crops that have been sold standing, the rate is usually so much per kanal of 22 merlas. The extra two merlas are allowed to compensate for bare patches, water-courses, and borders. Melons, green wheat, tobacco, sugar cane, turnips, &c., are near large towns sold in this way. There is only one measure of capacity throughout the district :—

4	tulas	...	...	1 paropí,
4	paropís	...	...	1 topah.
4	topahs	...	...	1 pái.
20	páis	...	...	1 bhpra.
40	páis	...	...	1 karwár.

The topah is the standard, and the other measures vary proportionately to the variation in the topah. The topah is nominally two seers in weight, but generally something under. Wheat is the standard, and there is of course the difference between the weight of a topah of wheat and a topah of other grain. In this district the topah varies from $1\frac{1}{2}$ seers to 2 seers through $1\frac{3}{4}$, $1\frac{1}{2}$, and $1\frac{1}{4}$. There are several ways of using the topah. When the measure is so held that only grain actually in the measure is given, it is said to be used 'gokú.' If some grain is piled up on the thumb and finger between which the rim is held, it is said to be used 'chappa.' There is only one measure of weight.

16	chittacks	...	...	1 seer of 80 tolas.
40	seers	...	...	1 maund.

Cotton is sold by weight, and also wool and goats' hair. Ghí is purchased from the Bár graziers by the kacha ser of $\frac{3}{4}$ th seer.

77. The first month in the year is Chetar and the last Phagan. They are given in order below, with corresponding English months. The spelling gives the local pronunciation.

Chetar	middle of	March to middle of	April.
Visakh	" "	April	May.
Jeth	" "	May	June.
Hār	" "	June	July.
Sáwan	" "	July	August.
Bhadron	" "	August	September.
Assí	" "	September	October.
Katch	" "	October	November.
Maggar	" "	November	December.
Poh	" "	December	January.
Máh	" "	January	February.
Phagan	" "	February	March.

The days are divided into eight pahrs (pronounced 'pohar') of 3 hours each. The following are recognised times of day :

AS USED BY			ENGLISH EQUIVALENT.		
Mahomedans.			Hindus.		
Adhí rát	...	...	Adhí rát	...	Midnight.
Pichlí rát	...	...	Pichlí rát	...	3. a. m.
Dhammí welá	...	...	None.	...	{ The last hour of the night before dawn.
Namázwelá	...	...	Parbhát welá	...	Daybreak.
Deh ubare	...	...	Vaddewelá	...	Sunrise.
Cháh welá	...	...	None.	...	{ Two hours or an hour and a half after sunrise.
Rotí welá	...	...	Do.	...	Bread time, 9-10 a. m.
Dopahr	...	...	Do.	...	Midday.
Peshín	...	...	Do.	...	3. p. m.
Lureshín	...	...	Vaddi Peshín	...	4. p. m.
Nadveshín	...	...	None.	...	5. p. m.
Digar	...	...	Do.	...	Half an hour before sunset.
Namáshán	...	...	Sandhíánwelá	...	Just after sunset.
Khuftán	...	...	Sota welá	...	{ Bed-time, when all the stars have come out.
Sota welá	...	...	Pahr rát	...	An hour after bed-time, 9-11-p. m.

78. The statement below gives the number of schools, teachers and scholars as they stood at the end of the year 1879-80. The figures in the smaller type are those of 1878-79.

Description of schools.	Number of schools.	SCHOLARS.						Average daily attendance.	Average daily attendance per school.	Tuition fees collected.	TEACHERS.			
		Agriculturists.	Non-agriculturists.	Hindus.	Mahomedans.	Sikhs &c.	Total.				Hindus.	Mahomedans.	Sikhs &c.	Total.
Anglo Vernacular Middle schools.	{ 2 2	32 65	19 28	42 70	7 17	2 6	51 93	46 88	23 44	113 124	3 4	0 1	1 1	4 6
Vernacular Middle schools.	{ 2 2	35 26	9 9	33 28	11 7	0 0	44 35	38 31	19 26	13 27	2 1	2 2	0 0	4 3
Anglo-Vernacular Primary schools.	{ 2 2	318 282	114 104	207 187	200 178	25 21	432 386	382 328	191 164	223 281	6 6	7 5	0 0	13 11
Vernacular Primary schools.	{ 26 26	1,142 1,181	40 40	595 587	588 600	29 34	1,182 1,221	880 1,021	38 39	34 44	16 14	25 25	0 0	41 39
Vernacular Female schools.	{ 8 8	77 85	160 199	155 166	101 106	11 12	267 284	225 246	23 31	0 0	5 5	4 4	1 1	10 10
Grand Total....	{ 40 40	1,604 1,639	372 380	1,032 1,038	877 908	67 73	1,976 2,019	1,671 1,714	42 43	384 475	32 30	38 37	2 2	72 69

The number of boys that attend school is but a small percentage of the total population. The number of agriculturists returned as scholars appears to be open to suspicion when compared with the relative numbers of Hindús and Mahomedans. As a general rule Hindús are not agriculturists. They may be small landowners, but their trade or calling is not agriculture.

Police and crime.

79. The statement below gives the number of thanás, outposts, and patrolling stations :—

STATIONS OR THANAS.		OUTPOSTS OR 'CHOUKIS.'		Road Choukis.
1st class.	2nd class.	1st class.	2nd class.	Patrolling posts.
Uch ...	Kuriánwála ...	Burrána ...	Ahmadpúr ...	Búrálá
Bhawána ...	Gapni ...	Khíva ...	Káim ...	Roránwáli.
Jhang ...		Garh Máharájá ...	Kot Isa Shah ...	Malera.
Chiniot ...		Bagri ...	Shekhán ...	Chúnd.
Shorkot ...		Massan ...	Kándiwál ...	Samundri.
Kádirpur ...		Bukhári ...	Sháhkot ...	Dij Kot.
Lálián ...				Toba Tek Sing.
				Rahú Khánúwána.
				Bastí Islam.
				Lodhránwála
				Chándná.
				Chah Bhareri.
				Máru Killa.

The Police force of the district consists of 1 Inspector ; 14 Deputy Inspectors ; 66 sergeants ; 19 mounted constables ; 327 foot constables. Attached to the ferries are 1 sergeant and 13 foot constables. The Municipal police of the towns of Jhang, Maghiána, Chiniot, Shorkot and Ahmadpúr, consists of 5 sergeants and 60 constables.

The pet crime of the district is cattle-lifting. There were 921 non-bailable offences reported during 1879, of which 501, or 55 per cent, were cattle theft. Another favourite offence is running off with another man's wife. Wives are looked upon by ordinary zemindars as chattels, things for which a certain sum has been paid, and for which a certain sum may be realised. If his wife elopes, the zemindar suffers injury to his property. His morals are not much offended, nor his self-respect. If he discovers where she is, he does not scruple to take her back, but he insists upon compensation for the loss of her services, and the certain amount of deterioration. If his demands are satisfied, he returns home as if nothing had happened. Cattle-lifting is a pastime to the denizens of the Bár. They do not see anything wrong in it. Any family that owns a herd is constantly losing and gaining animals by theft. The police are seldom called in ; the sufferer must be very hopeless when he has recourse to this last resort. What takes place when a man loses an animal, I am told on credible authority, is this. If by following up the tracks the beast is run down among other cattle, or after many days search the thief is discovered, there are two modes of procedure. The one is an amicable arrangement. The owner of the stolen property discovers

himself. The thief admits his claims, and satisfies him by making one other cattle worth considerably more than the stolen ones. The rightful owner is also treated with the greatest consideration until the matter is arranged. The stolen cattle are never given back. To do so might prove inconvenient in the future. The other procedure is different. The stolen property is often discovered in the possession of a family or tribe of influence, or living in a part of the country where the owner is not known, and when he does not think it advisable to seize the cattle or claim them. Instances are known where a claim having been made, the tables have been turned upon the claimant with serious results. He is seized, and a report is made at the nearest *Tháná* that he was caught just outside the homestead walking off with two cows, and when the *Thánádar* comes he will find the cows and captured ones' tracks, and as much evidence as he needs. After finding stolen cattle one plan is to send word off to the *Tháná* that your stolen cattle have been found. The *Thánádar* comes, and an arrangement is effected that benefits all alike. There are no arrests. The *Thánádar* is squared. The complainant discovers that he has made a mistake, and that the cattle are not really his. The accused makes the complainant a handsome present, and he departs. Another plan, and the one perhaps most generally adopted, is to lurk about the homestead where the stolen cattle are, and carry off at night an equal number to those that were lost. So long as the *Bár* people prey upon themselves not much harm is done, but when they raid the cattle and plough bullocks of agriculturists in settled villages, they cannot be punished too severely. I know for a fact that several villages lying near the *Bár* have been at times quite crippled from the loss of their plough oxen. The youth of the *Bár* show off their prowess by lifting the finest animals they hear of. Stolen property in Jhang slang is known at '*rát jam*,' 'born of the night.' Several lines '*rassa*' for forwarding stolen cattle run from this district to *Máltán*, *Montgomery*, *Gujránwála* and *Sháhpur*. To forward cattle is '*rassa lená*.' Except pure agriculturists the men of this district are born trackers. In tracking three or four men join. Each has a cudgel about five feet long. As each foot-print is found two lines are drawn on the ground before and behind the track, if the tracks are not very clear. Where the tracking is easy only one line will be drawn, and the trackers follow up the tracks walking at full speed. If the tracking is difficult, one man remains at the last found track, and the others make casts in all directions. Most wonderful feats in tracking are accomplished in this and similarly situated districts. Evidence as to tracking is too often thrown aside as incredible.

80. Jhang is an importing district, especially as regards food grains.

Trade.

Cloth and Manchester goods come from *Máltán* and *Calcutta*, partly by rail and partly on camels. Lime is brought down the *Jhelam* from *Khusháb*. Wheat is imported from *Wazirábád*, *Jallálpur* to the east of *Gujrát*, *Khusháb*, and *Máltán* in boats, and from *Chunían* on camels. Jowar, grain, barley, moth, mung and oil seeds are brought on camels from *Kamália*, *Sirsa* and *Ferozpúr*. Some wheat also comes from *Ferozpúr* at times. Rice is sent on camels from *Amritsar* and *Lahore*. Oil and oil seeds are imported from *Amritsar* and *Bhakkar* in *Dera Ismail Khán*. Moist sugar comes from *Muzaffarnaggar*, *Jullundur* and *Amritsar* by rail and camels. Molasses (*Gúr*) is brought from *Sialkot* and

Muzaffarnagar, and lump sugar from Multán. Fruits are brought down from Hazni and Kandahár by Powindas. Spices, condiments, and drugs come from Amritsar. Timber is floated down the Chenáb from Wazirábád and Jashmír territory. Cotton and thread are brought on camels from Dipálpúr, Multán, Ferozpur and Sháhpúr. Hardware comes up from Karrachi in boats, not by rail. Amritsar also supplies a little. Camels, donkeys and boats bring salt from Khusháb and Pind Dádan Khán, and alum from Kálábágh.

The export trade of this district consists mainly of a coarse description of cloth 'khaddar.' I am informed that eight lakhs of rupees' worth of this cloth was sold last year in Maghiána alone. Most goes to Afghánistán, and not a little to Dera Ismail Khán, Dera Gházi Khán, Sakhi Sarwar, and Multán. The means of conveyance are camels. Boats are hardly ever used. Soap is sent in large quantities to Núrúp in the Sháhpúr district, to Kálábágh, Dera Ismail Khán and the Salt range country, on donkeys and camels. Wool is exported to Karráchí and Ferozúp. In favourable years immense quantities of ghí are produced in the Bár, and are exported to Amritsar, Ferozúp, Bannú, and Dera Ismail Khán on camels, and to Karráchí by boat. The saji of this district goes to Amritsar, Sialkot, Gujranwála and Wazirábád. The principal marts are Maghiána and Chiniot. Kot Isá Sháh, Wású Astáná and Ahmadpúr are busy villages. Coarse cloth, wool, saji and soap, hides and ghí, are the exports. Food grains, sugar in various forms, and miscellaneous articles are all imports.

81. A considerable number of fairs are held in this district during the year. A list of the more important is given below.

PLACE WHERE FAIR IS HELD.	PERSON IN WHOSE HONOUR IT IS HELD.	DATE.	NUMBER OF VISITORS.
1. Shah Jiwana ...	Sháh Jíwana ...	27th Baisakh.	Not known.
2. Pirkot Badhána ..	Pir Abdúl Kádir ...	...	
3. Atháí Hasári ...	Pir Tájudín ..	3rd Friday in Chait.	
4. Pir Abdúl Rahmán	Pir Abdúl Rahmán...	Third Thursday in Chaitar.	
5. Kakkí Káthiá ...	Pir Káliyé ...	...	
6. Bhamrái ...	Háji Kásim Báli ...	9th Zilhaj.	
7. Hasá Balal ...	Sháh Balal ...	27th Hár.	
8. Mái ...	Sháh Sakhrá ...	10th Hár.	
9. Rodá Sultán ..	Fakir Gul Mahomed	7th Kátik.	
10. Jhang ...	Hír and Ránjá ...	1st Magh.	
11. Sádiq Nihang ...	Sháh Sádiq Nehang	Maggar.	
12. Mawán ...	Jindá Káliáná ...	Dushra.	
13. Báli Pátonwáná	Mián Lál Kánjá ...	12th Baisakh.	
14. Keráná ...	Sídh Náth ...	Chaitar.	

CHAPTER III.

PROPRIETARY RIGHT.

82. Proprietary right, as the term is understood now-a-days, can hardly be said to have existed either under the Syáls or under the Sikhs. As has been very truly remarked in the Settlement Report of a neighbouring district,—“It must always be remembered that under native rule no such thing as absolute proprietary right was recognised. The missing class was not the hereditary tenant, but the proprietor.” It is difficult, perhaps impossible, to define with any accuracy to what extent rights of property in land did exist, but they were certainly not extinct. The ruling power was not an all-powerful landlord, and all the subjects, except those enjoying special privileges, merely tenants-at-will. That some rights of transfer and mortgage were possessed and exercised during the reigns of the later Syál Kháns, is abundantly proved. Many undoubtedly genuine deeds have been produced in land cases during this Settlement. The history of the district and the tribes that inhabit it, plainly teaches us that since the time of Walidád Khán there have been no great changes in the location of the tribes. They still hold the same villages that they then held. The lands of Kot Khán are still the property of the descendants of Walidád’s successful lieutenant Sharíf Khán Aliáná. The Rajbánás are still the proprietors of the villages conquered by their ancestors from the Beloches. Even the Nols, though subjected by the Syáls, possess most of the lands, lying on either side of Jhang, that they held before the advent of their subduers. At the same time I believe that the property of the subject was strictly confined to the land in his possession. By possession I mean the land cultivated by the subject with a reasonable amount of immediately adjoining culturable waste. Beyond this the individual had no proprietary rights whatever. Neither under the Syáls nor under the Sikhs were there village estates with demarcated boundaries as there are now. These are our creations, exotics transplanted from the plains of the North-Western Provinces. I shall have more to say on this point hereafter. I mention it now to dissipate any false preconceived ideas touching ancient proprietary right in this district. Knowing the main facts of the history of the Syál tribe it is not difficult to picture how fluid must have been the state of property when they first settled in the country, and how it gradually hardened during the later reigns of the Kháns and under the Sikhs. The Syáls for some time after their arrival were shepherds and herdsmen, and the extent of their agriculture, judging from the state of the district at annexation, did not probably exceed what the nomad tribes of the Bár practise at the present time. They did not even cultivate the easily-tilled lands subject to annual floods from the river. Mr. Monckton speaks about the dense jhow jungle on the banks of the rivers in his time. The word ‘Márú’ is still the prefix in the names of several villages on the Chenáb, signifying a dense and dangerous jungle. Until Walidád’s time the Syál Kháns were merely tax-gatherers under the Imperial rule, and we know but little about the condition of their subjects. Hitherto the Syáls had been multiplying and spreading over the land, and the different clans settling down permanently in the various parts of the country they now occupy.

These settlements are the nuclei of our present villages. The inhabitants cultivated more or less land near the hamlet and on their neighbouring wells. Adjacent villages or settlements seldom interfered with one another. There were no boundary disputes because there were no boundaries. The intermediate waste was the property of the State. The population in those days must have been very scanty, and the non-existence of boundaries did not prove inconvenient, as the waste lands did not belong to the villagers. A certain proportion of the produce was taken by the Government of the day, and so long as this was paid and the lands held by the individual were not badly cultivated, the cultivator was left in peace. So long as a good revenue was yielded the Government asked no questions, but if the subject was found to be in possession of land that he did not cultivate, or endeavouring to cultivate more land than his means would allow of, the Khán had no compunction in granting the uncultivated land to any applicant who applied for it, or in making over the excess of the land cultivated to any other person who had the requisite capital for its proper cultivation. The object of the ruler was an increase of revenue, and if occupancy or proprietary rights, as we understand the terms, stood in the way of its attainment, it was so much the worse for them. If this was the case under the later Syáls who might be expected to have had some compassion for their subjects, it was only too probable that under the Sikhs the disregard of property in land should be intensified, and that the rulers, Hindus by caste, should have employed every device to wring as large a revenue as possible out a subject Mahomedan race.

83. The extortionate tyranny of the Sikhs, and also I have heard of the later Syáls, gave rise to a new species of right that of Háthrákháidára. 'Háthrákhái,' or 'talúkdári' as it is also called. There is no difference between the two rights, and in every case the origin of the tenure is the same. The original proprietor is always in cultivating possession of the land. The broken-hearted cultivator of the land, who was also the proprietor, finding the demands and exactions on account of revenue absolutely unbearable, made over the proprietary share of the produce and with it the responsibility for the revenue to some influential man whom the Government treated with consideration, who assented to the arrangement, thinking that he would probably be able to make something out of the contract, for contract it was at the outset and nothing more. The cultivating proprietor said to the contractor, "I cannot pay the revenue any longer. Do you take the proprietary share of the produce, allowing me some fee in recognition of my rights, and pay the revenue, yours being the profit and loss." The contractor who thus engaged to pay the Government revenue in consideration of the proprietary share of the produce minus the proprietor's fee, is called 'Háthrákháidár,' 'Háthrákhnewálla,' and the person who makes over the produce and withdraws from the responsibility for the Government revenue, 'Háthrákhwánnewálla.' 'Háth rákhná,' to place the hand on, is equivalent to 'to protect,' and the casual form means to get the hand placed, to obtain protection. Originally there were no conditions as to the termination of the contract, but it was undoubtedly understood to be terminable at the will of either party, and if we find that this power was seldom if ever exercised, the fact will be intelligible enough when the character of the Syál and Sikh revenue admini-

tration is recollected. As a rule the original proprietor would not be anxious to regain his "rights, symbols more of misery than of benefit," and the Hāthrakhāidār, perhaps paying nothing or only at the most favourable rates to the Khālśa exchequer, would be in no hurry to renounce an easy and lucrative source of income. But had the 'Hāthrakhāidār' lost his influence with the Governor and been squeezed for revenue as an ordinary agriculturist, he would have thrown up his contract, and the original proprietor would not have thought of raising any objection. Conversely, the right of resumption would belong to the original proprietor. In Chiniot and Shorkot the amount of land held by these middlemen is very small. They are most numerous in Jhang, and the land they hold is generally on the banks of the Jhelam. The Nāth Sāhib of Jhang, a Hindū fakīr, Charan Dās Sārāf, Brahmins, Gusains, and others, who, as religious devotees, were held in much consideration by the Sikhs, are the large Hāthrakhāidārs. At the first Regular Settlement the general opinion of the Settlement Officers was, that the 'Hāthrakhāidār' was, to use Mr. Vans Agnew's words:—"A mustājir on the behalf of the proprietor for the Government revenue taking a share of the produce." He was considered to have no power to alienate his status, for the proprietor might not have confidence in the third party to whom the 'Hāthrakhāidār' wished to transfer his privilege. Mir 'Izzat Ali's opinion, dated 23rd August 1855, to which Mr. Monckton generally agreed, is still extant. He considered the Hāthrakhāidār to be a simple 'mustājir,' having no power of transfer, and that the contract was terminable at the will of either party, but unfortunately he never could bring himself to interfere with the *status quo ante* in the cases affecting the tenure that he had to deal with. He noted that cases had occurred where the Hāthrakhāidār had been ousted by the original proprietor either of his own motion or through the action of a Panchāyet, and also where dispossession had taken place in accordance with a judicial order. But as far as has been ascertained, not a single order of any Court has been discovered terminating a Hāthrakhāi. In all cases the settlement was made with the Hāthrakhāidār without any condition whatever as to the nature of his tenure. The consequence is that the right of Hāthrakhāi, the right to take the proprietor's share of the produce, minus a fee, varying in amount, in recognition of the rights of the original proprietor, has crystallized into a permanent transferable and hereditary right. The Hāthrakhāidārs being men of power, have been steadily encroaching on the rights of the original proprietor ever since the last Settlement, and have acquired by prescription certain privileges in regard to trees and bhūśa to which I feel convinced they originally had no right whatever. There have been several cases from the villages of Sahjar, Chela, Jhok Bhūrānī and Bhagat Rām Jas, which should be consulted by any district official who wishes to ascertain the detailed nature of the right. With the Jhok Bhūrānī case will be found a memo in which I have embodied all the information I could collect, and also abstracts of the principal cases relating to the right. Hitherto the Hāthrakhāidār has not claimed any right to the land, and right he has none. All that he can claim is his share of the produce. He cannot claim to share in the land by partition, and he has nothing whatever to do with arranging for the cultivation. As a rule the 'Minār,' 'Jakk, Rasūl arwahi' and 'Ganesh' fees belong to the original proprietor. There are some doubts as to 'Bhārā' and 'Mohassil' fees. The nature of this tenure has been hitherto most

imperfectly understood by the Courts before whom cases have been instituted. Even the Chief Court, '*quandoque bonus dormitat Homerus*,' failed to distinguish in a suit brought to terminate a 'hathrákhái' what the real issue was; though it is only fair to say that the two lower Courts were equally wide of the mark. Between the 'Háthrákháidár' and the 'Mustájir' or 'Mashakhsadár' of the Dera Ismail Khán district there is an important distinction, which Mir 'Izzat Ali and Mr Vans Agnew appear to have lost sight of. The 'Mashakhsadár' was a farmer of the revenue appointed by Government generally over a whole village or *iláká*. The Háthrákháidár is the nominee of the individual, the entrustee of his privilege, to take the proprietary share of the produce and pay the revenue. The 'Mashakhsadár' takes the 'mahsúl' the Government share of the produce, and there is no contract between him and the zemindar. The share taken by the Háthrákháidár is the result of an agreement between him and the original proprietor. Viewed in the light of our present Revenue administration, the contract appears to be a very one-sided transaction, but at the time it was made the consideration was material and valuable, viz, protection from the extortionate demands of the Sikh farmer. Now the contract exists in virtue of prescription, while the reasons for its existence have passed away. If the right course would have been to oust these entrustees of the right to pay the revenue, the Regular Settlement was the time and opportunity for such a measure. The tenure was then comparatively in its infancy, but now more than 20 years have been added to its age. One reason why the Háthrákháidárs maintained their position was the doubt and distrust with which our first Settlement operations were regarded by an ignorant people. In fixing their boundaries even their object was not to include as *much* but as *little* land as possible within the village. Instances of this are numerous.

84. The Taraddadkárí tenure also dates from the time of the Syáls, though it was under Sáwan Mal's fiscal administration that it was most fostered. This tenure is closely allied to the *adhlípt* and *chakdárí* tenures of the southern districts of the Múltán and Deráját divisions. The conditions and circumstances under which the taraddadkárí tenure arises and has arisen are exceedingly diverse, and the rights and privileges of the Taraddadkár are of great variation. The highest form of the tenure is where the Taraddadkár is a full proprietor, the lowest where he is nothing more than a tenant who, so long as he cultivates, cannot be ousted, but whose rights are neither transferable nor hereditary. The indigenous relations subsisting between proprietors and tenants in this district have favoured the growth of this tenure, no less than Sáwan Mal's efforts to extend cultivation. In Jhang it is the proprietor who runs after the tenant, and beseeches him to cultivate his well. The proprietor often found, even now finds it worth while to make over a well in working order to a tenant on the terms that he should pay half the proprietary share of the produce to the proprietor who remained responsible for half the revenue, and himself retain the other half and pay half the revenue, it being understood that so long as the tenant continued to cultivate or arranged for cultivation he could not be ousted from the land so made over. Any person holding land belonging to another on these terms, is called a Taraddadkár. He has taken the land or the well on 'taraddad.' His tenure is 'taraddadí' or 'taraddadkárí'. Where

a well in working order was made over, if the making over took place many years ago, the Taraddadkár's right will probably be hereditary but not transferable. His son will succeed him, but he cannot sell or mortgage his rights, as the agreement is a personal one. Where, however, the proprietor of the land made it over to a Taraddadkár, who constructed a well in it at his own expense, the Taraddadkár in the absence of any express agreement is a full half proprietor. So long as the well lands are undivided, the Taraddadkár proprietor is responsible for the cultivation of the land, and either loses his rights or becomes liable to be cast in damages at the suit of the original proprietor of the land, if he fails to cultivate or cultivates in a manner contrary to good husbandry. But he has the power to partition the well estate, and once partition is effected he becomes absolute proprietor of half the water and the land that has fallen to his share. The right to claim partition is the test of full proprietary right. If the Taraddadkár cannot claim partition he is not a full proprietor, whatever his other privileges. All Taraddadkárs have the power of arranging for the cultivation. It does not matter whether the Taraddadkár cultivates himself or by a tenant. So long as the land is cultivated the original proprietor cannot interfere. The above remarks apply chiefly to old 'taraddad' tenures. Of late new tenures of this description have been chiefly created by deed, and it is only where the deed is silent that evidence of local custom is admissible. The original proprietor has however to be very careful how he treats his taraddadkárs. In one case the deed creating the tenure declared that the Taraddadkár had no power to mortgage. He wanted to mortgage, but the proprietor refused to allow him to do so. The Taraddadkár then threw up the well, and the proprietor found himself saddled with a well out of work but bearing an assessment, and with but little hope of obtaining a tenant. I do not know of any instances of the taraddad tenure on sailáb lands. There are none in Shorkot, and probably none in Chiniot. There may be a few in Jhang. The rights of hereditary tenants on sailáb lands are analogous to those of Taraddadkárs, but an occupancy tenant hardly ever pays half the revenue. As a rule he pays at the same produce rates as the tenant-at-will. His occupancy rights were acquired by his breaking up the land. He probably also took the entire crop for the first one or two years rent free.

Of the true talúqdári tenure in this district a few instances only are found. The terms 'hathrakhái' and 'talúqdári' have become somewhat confused, as under the former tenure the original proprietor is called 'talúqdár,' and his proprietary fee taken from the 'hathrakháidár' 'haqq-talúqdári.' Rights similar to those of superior proprietary right are also styled 'talúqdári' in Jhang, e.g. where cultivators during the rule of Sáwan Mal became so far independent that they were created proprietors at the first Settlement subject to a small cash malikána payment to the original lords of the soil.

85. The fiscal administration of Sáwan Mal left indelible marks on the proprietary system of the district. The theory that the land belonged to the State was carried by him to far farther lengths than it had ever been carried before. Under the Syál rule the rights of the dominant tribe had been more or less respected, but under the Diwán they saw men who and whose ancestors had as

tenants tilled their lands from time immemorial, and, as inferiors, had given them their daughters in marriage, elevated to the rank of full proprietors. The Núns of Pipalwálla, the Siprás of Jalla Bharwáná, the miscellaneous body of proprietors in Bela Garh and Garh Máharájá, are a few of the many instances in point. Under Sáwan Mal any person who broke up land in any portion of the district, or who set to work a well that had been deserted, became the proprietor of that land or well. In practice the Diwán held that no man had any right to any land that he could not cultivate, and grants of waste land were given to anybody who could bring it under cultivation. Not only did this take place, but many persons who had formerly been tenants-at-will found themselves invested with the doubtful privilege of paying direct to the State. The proprietors dropped out because there was no room for them. The State took every thing it could from the cultivator, and the idea of a middleman intercepting part of the collection was not for a moment entertained. Grants of waste sailáb land could be obtained by anybody who could pay the requisite *nazrána*. The result can easily be imagined. The Syál settlements and villages still remained Syál, but there was a strong infiltration of proprietors of every class. Nothing was sacred to Sáwan Mal. Chúrás and kamíns were in his eyes just as good proprietors, probably better, than Syáls and Beloches. There were then no boundaries. The Syáls retained what they could cultivate. The waste was occupied by Sáwan Mal's colonists. Such a system was of course fatal to all proprietary rights over tracts, such as the superior proprietary rights that still exist in the Indus Káchi and the Damán of the Dera Ismail Khán district. When the representative of the Syál Kháns was dependent upon the charity of Sáwan Mal for his daily bread, it is not difficult to understand why no superior proprietary rights survived. Probably such rights too were not very common, though the Ahmedpúr and Garh Máharájá Syáls and the Nawáb of Jhang have sometimes claimed that they did exist. The few instances of superior proprietary right that do exist, *e. g.* those of the Rajoá, Thatteh Bála Rájá and Alipúr Syuds over Bukhári, Tárú and Buddhí Thatí, are creations of the Regular Settlement. The land belonged to the Alás, but the Adnás had been so long in possession by taking produce and direct payment of revenue to the Sikhs, that they were deemed to be entitled to the proprietorship subject to the payment of a proprietary fee, usually a percentage on the jama.

86. Shortly after annexation, the time between being taken up by two Summary Settlements, the Regular Settlement commenced, and it became necessary to fix village boundaries and to creat private proprietary rights in land where they had never before been recognised, even if, as is very doubtful, they had ever existed. The following quotation from Mr. Monckton's report describes how this was effected, and what the villages were when the Regular Settlement began : " The revenue arrangements of the native Governments in the Múltán province, never having recognised the village system, but dealing separately with each well or cluster of wells, there were naturally no well defined estates, and the mauzahs in Mr. Cock's and the Summary Settlements were merely parcels of land paying revenue under one denomi-

The creation of villages
at the Regular Settlement.

nation, but with no fixed principles for their union. Generally there would be one principal village by which the name of the Mahál would be distinguished, with subordinate hamlets and outlying wells often at a great distance and situated within the boundaries of another estate. In parganas Chini and Jhang the mauzahs were tolerably regular, and in making the demarcation of boundaries the outlying wells were treated as chaks, if their owners desired to continue attached to the parent village. In parganas Kádír and Uch the holdings appeared to have no tie in common. Many maháls were composed entirely of portions of lands (wells?) scattered among other estates and having no village site or any head whatever. These last were all abolished in the revised *hadbast*, and the estates were formed with reference to village sites only; no outlying chaks were left except in *jághir* villages. The people readily acquiesced in the change, and any other course would have led to indefinite complications in the preparation of the record of holdings and responsibilities, and in the determination of rights in waste land, especially the *sailába*, while no collocation of holdings according to similarity of caste among a people wholly unaccustomed to act in common, offered so fair a chance of cementing a union, as that of common interest involved in a compact topographical distribution." The effect of this "fortuitous aggregation in maháls" of wells sunk by different families and races from a revenue point of view, will be discussed in its proper place. It is only with its effect on property that we are now concerned. Briefly within the mahál or village, the boundaries of which had been thus arbitrarily fixed, each man in possession of land of which he took the produce and paid the revenue, was recorded as proprietor. The waste lands were almost invariably recorded as '*shamilát deh hasb rasd khewat*,' village common on Khewat shares. But little attention appears to have been paid to the determination of rights in the waste. In fact there probably were no rights. In some villages the cultivation was measured up alone, and alone numbered on the field map. The waste was all recorded as one field, and its area was obtained by deducting the area of the measured cultivated area from the total area of the village according to the Revenue survey. If the people had understood our revenue system, and if there had been any inquiry into the proprietorship of the disused wells in the waste, I have no doubt that there would have been a considerable diminution of the area recorded as village common. But the people were doubtless apathetic to a degree, and any energy evinced was rather directed against the acquisition of waste land, so that unless it has been reserved as Government property there was perhaps nothing to be done except to record the waste as village common. There are no instances in the district of the waste being conferred on the headmen as a reward for taking up the assessments. The waste lands included in the village boundaries were thus made a present to the Khewatdárs. It would probably have been best to have retained to Government some such authority in respect to the sinking of new wells as was exercised in the Thal until the last settlement of Dera Ismail Khan, or, if Government was to retire completely, the old families of the district, the founders of the village, might have been given a preference over the motley crew whose proprietary rights only dated from the time of the Diwán. Some of the Syáls managed to regain property of which they had been despoiled by the Sikh Kárdárs, but it was not much. Regrets,

however, are now vain, and if mistakes were made, the lapse of 25 years has accustomed and familiarised the people to them, and the thing that is, is accepted as the thing that is right.

87. There is hardly anything to note about occupancy tenants beyond what I have written above. The area occupied by this class is very small, and except in the villages of the Kálowál parganá transferred to this district in 1861, they pay at much the same rates as tenants-at-will. The right is not much valued, and during the present Settlement many occupancy tenants voluntarily abandoned their rights. In the Kálowál iláka the occupancy tenants generally pay the assessment plus a malikána. Of this portion of the district Mr. Ousely writes,—“the heavy assessment of the Sikh times had quite trampled out proprietary rights, and artizans and village servants and proprietors all paid the Government revenue by an equal rate levied, generally speaking, on the number of ploughs suployed by each man. In these parts of the district cultivators of long standing were recorded as owners of the land in their occupancy, and they paid their revenue at the village revenue rates. They had of course no proprietary title in any of the village lands except what was in their actual possession as cultivators.”

88. Besides the ordinary form of mortgage, there is a kind of running mortgage called Lekha Mukhí. The ordinary mortgage is of the usual usufructuary kind. The mortgagee pays the revenue and takes the proprietary share of the produce. Redemption can only take place on the 1st day of the months of Hár or Mágh. The mortgagor is responsible for the cost of repairs to a well, the construction of a new one, if the old one falls in, or becomes useless, and the mortgagee has in such cases full powers to construct or repair a well. The cost of such repairs &c. is added to the original mortgage money and must be paid before redemption can be effected. The liability of the mortgagor for such charges may appear at first somewhat unjust, but when it is remembered that in this district generally land can only be cultivated by the aid of artificial irrigation and that a useless well means no cultivation, it is not a matter for surprise that the mortgagee should insist upon conditions that assure to him the use of the well in good order as well as that of the land. The mortgagee cannot throw up his mortgage if the well falls out of work, and so long as the mortgage remains it is he who will have to pay the assested revenue. It is only fair too that a mortgagee, if the deed allows him to construct a new well, should recover its costs at redemption as the value of an unexhausted improvement. The mortgagor is also liable for expenses attendant on the breaking up of new land by the mortgagee for purposes of cultivation. The mortgagor almost invariably receives some fees in kind in recognition of his proprietary title; 2 topahs per karwár and 1 topah per threshing floor are as common fees as any. The mortgagee can cut trees for *boná fide* repairs to the well, the well buildings, and agricultural implements needed for the cultivation of the well lands. As a rule the original proprietor is left in cultivating possession. Sometimes the mortgage deed expressly reserves to him the right of cultivation. There are instances of separate sub-mortgages of the right of arranging for

the cultivation. In old deeds there is usually no stipulation as to the right to cultivate. In those of modern date the right is either distinctly reserved to the mortgagor or mortgagee, and if to the former a stipulation is added that if the mortgagor fail to arrange for the cultivation of the land the right to do so shall accrue to the mortgagee. In a very few instances the mortgagee remains responsible for the payment of the revenue. In my opinion the State should refuse to recognise such a stipulation in its own papers as being directly opposed to the theory of our Revenue system that the land and the person who takes the proprietary share of the produce are primarily responsible for the revenue. When under a mortgage the mortgagor agrees to pay the revenue, and, after putting the mortgagee in possession, flies the country, from whom is the *lambarlár* to collect the Government assessment? From the absconder or the mortgagee in possession? Surely from the mortgagee. In no way should any attempt to transfer the responsibility for the revenue from the land to the individual be allowed. In recent mortgages it is often conditioned that redemption shall not take place until after a fixed period. In some mortgages the mortgagor is left in possession and pays the revenue, the mortgagee only charging the land with an annual payment in kind of a fixed amount.

89. *Lekha Mukhí* is a running mortgage. The proprietary share of the produce is made over to the creditor who pays the revenue and keeps an account of receipts and disbursements. *Lekha Mukhí* conveyances arise in two ways. One is where the proprietor has obtained a loan from the *Lekha Mukhídár* and makes over a well or a share in a well to his management. The other is where an estate is made over to the *Lekha Mukhídár*, not so much as creditor as agent. The accounts are kept in the same manner in either case. The *Lekha Mukhídár* collects the crops and credits the proprietor with their value. He debits him with the Government revenue, the costs of repairs, maintenance &c., in fact with all working expenses and charges usually defrayed by the proprietor. His fee consists of the *muhassili* two *topahs* per *karwar*, and he also charges interest if the proprietor gets into his debt. The interest is never less than 12 per cent per annum, and is often much higher. *Lekha Mukhí* in the hands of an astute *Hindú* is usually fatal to the *zemindar*. The *Lekha Mukhídár* embezzles and peculates as far as he dares.

The amount of advances on mortgage and *Lekha Mukhí* will be discussed in Chapter VI.

90. In conclusion I may note that in many villages of this district the proprietors of date palms are not the proprietors of the soil in which they stand. The origin of this tenure I have not been able to ascertain. In the *Deraját* the date palms were often the property of the State as a separate source of *sayer* revenue. In this district, as far as I can learn, the date palms were separately leased, but were never considered the property of the State. Perhaps the present proprietors, where they are not the lords of the soil, were originally the persons who contracted for the revenue from year to year, and were invested with the rights of property at the Regular Settlement. If old

deeds are to be trusted, private proprietorship in these palms is of considerable age. Whatever its origin the fact remains that the proprietors of the palms are often not the proprietors of the land, and where the proprietorship in young trees is in issue, the determination of the rights of the two proprietors is no easy matter. An attempt to lay down general principles has been made in the case *Mahomed Baksh Atishbaz &c. v. Radhu Gursahai &c., Marotras &c.*, inhabitants of Shorkot. A perusal of the file might be useful in the decision of cases of a similar nature.

CHAPTER IV.

AGRICULTURE.

91. With the exception of a little 'barāni' rainland cultivation in the northern half of the Chiniot tahsil, agriculture is in the Jhang district confined to lands either naturally moistened by inundation or percolation from the Chenāb, Jhelam and Rāví rivers, or artificially irrigated from wells by means of the persian wheel. No other system of lifting well water is known in this district. It must not, however, be supposed because there is, so to speak, no cultivation that depends solely upon rain, that it is a matter of indifference whether the country gets rain or not. Sailāb lands of good quality if well wetted during July and August require wonderfully little rain, but *without* rain the crops are never good. To crops on light and sandy sailāb lands no rain means destruction. The crop looks very well up to the latter half of February, and then the dryness of the Jhang climate soon makes itself felt. If the crop does not dry up the ears will be small and stunted, and contain only a few shrivelled grains. In the case of the wheat crops of 1879, we had a remarkable instance of how little rain is required to ensure a good yield, if it only comes at the proper time. The summer rains of 1878, from 15th July to 15th August, were unusually plentiful, but then they stopped. There were heavy floods in the Chenāb valley. A large area of wheat was sown rather late on sailāb lands, but in good time on the wells. From the end of August to the first half of March not a drop of rain fell. In March the weather became cloudy, and for a week or so there were slight showers and drizzles. Finally from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch of rain fell in one gentle continuous shower. This was all the rain the wheat got, and it was one of the best crops in point of grain, that the district has ever known. A custom prevails all through the district, called 'ijāra,' of selling the standing crop for so much grain to a contractor. The price is so much a kanāl. In 1879 the zemindars in many villages repudiated these engagements and refused to allow the contractors to cut their wheat. In one village there was something very much like a riot, and the zemindars got hold of and burnt most of the small pieces of papers, called 'chittān,' on which the terms of the contract had been put down. In another village, where the proprietor was more honest, the "ijāredārs"—contractors—were said to have cleared 50 per

cent and more on their undertakings. I have no doubt in my own mind that the saturation of the ground in July and August had a good deal to do with the heavy yield, though the zemindárs did say that before the March rain they hardly expected to have any crop at all. The last wheat crop (1880) was below the average. There was average rain at the end of June and one other fall at the end of August 1879. There was no more rain until the middle of February, when there was one fall of about $\frac{3}{4}$ inch, and this was the last. The wheat crop would, I think, have been above the average even with this scant allowance of rain, but March was the hottest March I have ever experienced. Tents were almost unendurable after the 15th, and regular hot dry winds from the south and south-west set in. Even well irrigation could not preserve the crops, and plants dried up with water standing in the well beds 'kyáre.' What wheat was harvested gave a very bad sample. The berries were shrivelled, hard, very light in weight and very few in number. I was told, and from my own experience I do not think the falling-off was exaggerated, that acre for acre the yield of the wheat in 1880 was $\frac{1}{3}$ and $\frac{1}{4}$ what it was in 1879. Hot winds and a parching atmosphere are of course very rare in March, and had the weather been average I think the harvest would have been a good one. If I am right then even this year's harvest, so far from militating against the theory that it is not so much heavy rain as rain in season that is needed, rather serves to strengthen it. The jowár and mash múng crops of 1879 on sailáb lands were extremely good, until the severe frosts about the 25th November (as unusual as hot winds in March) did so much damage. I have heard it said that the outturn of all crops on well and sailáb lands is best in years of moderate rainfall, and I think it is generally true. This is not the same as saying that the district does best in years of moderate rainfall. For the public welfare Jhang could not have too much rain. Heavy rain means heavy grass crops, and it is far more important in a district where almost every one, high and low, owns cattle, that there should be good grazing, than that the crop outturn should be heavy. In 1878 the heavy rain in July and August was too much for the cotton. The bushes ran to wood, produced only a few pods, and the crop was, if any thing, below the average. In the Dera Ismail Khán Thal the case is much the same. From a grazing point of view the Thal cannot have too much rain, but the Thal well owners will tell you that too much rain is very injurious to their wells and diminishes the crop yield materially. To sum up, for a good crop and a heavy outturn an average rainfall judiciously arranged is best, but for the general well being, the more rain the better, the months during which the kharíf and rabí crops ripen and are harvested being excepted.

Cultivated area of the district.

92. The cultivated area of the district is arranged below with the number of wells that were at work at measurements :—

Wells.	Cháhi.	Sailába.	Baráni.
11,018	2,27,299	98,748	3,480
Percentage ...	69	30	1.

In Cháhi I have included all areas artificially irrigated, whether by canal, jhallár or well. Nahri, or inundation canal cultivation, differs but little from sailáb, but the means of irrigation are not natural, and therefore I have here classed it with Cháhi. The different methods of agriculture from wells and jhallárs, on sailába and nahri, and on barání lands, will now be discussed.

93. In Jhang wells are 'pakka' where the cylinder is made of burnt bricks cemented by mud, and 'kacha' where the well is merely a hole in the ground, or where the hole is lined with a cylinder of wattles or stakes. A 'kacha' well without any lining or with a wattle lining is termed 'károra.' These are most common. A kacha well lined with stakes arranged in a circle and banded together, is not met with often, and is called 'kuttiál' or 'gandiál.' A jhallár is the name given to a persian wheel when set to work on the edge of a nullah, stream or pond. The best jhallárs are those where the pit from which the water is drawn is a short distance, a few yards, away from the edge of the stream or pond. The pit is rectangular, with an inward slope, and the lowest portion is sometimes lined with bricks. This reservoir in which the water pots revolve, is connected with the stream or pond by a narrow channel open at the top. In Maghiána I have seen some of these channels lined with brick. Usually the jhallár pits and connecting channels are constructed in the roughest manner. In the case of other jhallárs the well pots dip into the stream or pond itself. Here there is no pit, but the sides of the bank have to be faced off and strengthened, over which the well pots and vertical wheel hang. Pakka wells are divided into double wheeled and single wheeled. There is no difference in the building, except that one is larger than the other. Mortar is hardly ever used to cement the brick work of a pakka well. It is supposed to altogether spoil the water for drinking purposes, and to injure it for irrigation.

94. The sinking of a pakka well is a business not unassociated with awe to the zemindar. First of all the services of a man wise in the finding of water must be obtained, and the site of the well determined at his direction. Well sinking. Masonry wells. Next a small hole is dug in the ground, a libation of oil is poured into it, and 'gúr' is distributed. Then the well hole is excavated to the water level. The well curb 'chakk,' made of kikar wood, is then let down by four ropes to the floor of the hole, and 'gúr' is again distributed.

The well cylinder is built up on the curb to a height sufficient to take it down to the required depth. Around the top is constructed a platform with containing walls of kána and sar bands wound round and round and kept in place by pegs. All the sand that is dredged out of the well is packed on to this platform, and its weight serves to sink the well. It is not thrown aside until the well has been sunk as far as it is to go. The upper three or four feet of the brick cylinder are also strengthened by being wound round with kána bands. This may be dispensed with if water is near, and the well only a small one. A well is sunk down to the stratum that is called the 'sach.' In this district the true 'sach' is a stratum of coarse sand of a reddish colour. If this stratum is not found every thing that is bad

happens to the well. The water is dirty and the supply deficient. Holes form under the 'chak.' At first the well only sinks, but finally the brick work cracks or falls in. The 'sach' of wells on the Chenāb is good, though there are exceptions. On the Jhelam it is inferior. The definition of 'sach' is not easy, but it apparently means a good water-bearing stratum of pure sand through which water springs or percolates regularly and rapidly into the well. When the diver asserts that the 'sach' has been reached, the water supply is at once tested by borrowing 7 or 8 pairs of bullocks and working the well for two days as hard as it can go. If the water level in the well is thereby only a few inches lowered, the water supply is good. The 'sach' having been reached the well is worked for about a week to further test the water-bearing capacity of the stratum, and if everything is satisfactory the platform is taken off and the sand thrown down round the well. Where the 'sach' is good the well scarcely ever requires cleaning. All that has to be done is to pick out the well pots and fragments that tumble in from time to time; whereas with a bad or no 'sach' the well requires constant attention. Sand and mud accumulate inside, and have to be removed, and the well has to be stopped because there is no water. When the brick work cracks or falls in, the well is rendered serviceable by sinking inside a small wood cylinder called 'chak,' 'kothí,' 'bachcha,' 'chobachcha.' Sometimes the crack is patched up, but this is not usual.

A kacha well is only sunk down low enough to ensure a good supply of water. They are not renewed or repaired, but have to be cleaned out. The water in a kacha well is never clear. A well with a wattle cylinder lasts about 6 years, one with a stake cylinder about 15 years.

95. The question—"What does it cost to sink a well?" must be answered just as the question—"What is the area a well can irrigate?" by—"It depends." I have heard of wells close by the river where water is within a few feet of the surface having to be sunk 20 and 30 feet before the desired 'sach' was found. Here you have wells where the depth of water in the well is twice as great or more than the distance from the water level to the surface of the ground. Three years ago I sunk a well in my garden in the zemindar's fashion, pouring out oil, distributing 'gúr' in the orthodox mode, and it cost me Rs. 250. The well is 20 feet to water and $7\frac{1}{2}$ feet under water. The 'sach' is excellent, and there were no hitches in the work. In the Montgomery Settlement Report the cost of a well 40 feet deep is put at Rs. 300. I understand this depth to be the depth of the brick work. The approximate cost of wells of different depths in all the Punjab districts is given in the Famine Report, but the enormous differences between the answers from the various districts makes one doubt more than ever what a well does really cost. To a zemindar the cost of constructing a well is not much. The well hole is dug out, the bricks made, burnt and carried by the Kamíns. Fuel is supplied by the village waste and his cotton fields. The bricklayers' and divers' work is the only heavy charge. All the labour of spreading the sand, pulling up the dredge &c., is performed by the Kamíns, and they get nothing but a meal a day.

All this came out with particular clearness in a case that was tried by me, in which the main issue was whether the expense of constructing a well had been borne by a taraddadkár or the owner of the soil jointly or not. I do not think I am far wrong in putting the cost of a well to a zemindar at half what it would cost a non-proprietor. I estimate that a well 20 feet deep will cost Rs. 200 ; one 30 feet deep Rs. 300, and one 40 feet deep Rs. 450.

96. The people have most various modes of dividing the water of a well. So many "pahrs" of three hours each are allotted to each share, and after a fixed period the times of the "pahrs" are changed. If the well is held on three-thirds and 4 consecutive "pahrs" are allotted to each third, then the yoking times change of themselves, *e. g.* A. B. and C. hold a well and each works the well for 4 "pahrs." A's turn at the well, if from midnight to midday on Monday, will be from midday to midnight on Thursday. Similarly if a two "pahrs" turn is allowed to each proprietor of $\frac{1}{3}$, the time of each turn changes in regular order. If, however, the turn is of two "pahrs" for each quarter in the well, then the change has to be made artificially. The change when made gives the two night turns to the proprietors who before had the day turns, and they again arrange between themselves to take in alternate weeks the first or second turn. Turns are called "várís." They are always calculated on "pahrs" of 3 hours each. A "vári" is never less than two "pahrs" or 6 hours, and never more than 8 "pahrs" or 24 hours. A pair of bullocks works 6 hours at a stretch. There is, as far as I can learn, no difference between the system of "várís" in the Hethár and Utár, on shallow and deep wells. "Várís" always correspond to the proprietary shares in the well or to the proprietary shares represented by the amount of land held by the tenants. A one-third sharer in a well will not get an extra long "vári" because he possesses an extra pair of bullocks.

97. The areas irrigated by wells in different parts of the district differ considerably, as might be expected. In this paragraph I propose to discuss the question,—“What area does a well irrigate.” is the average area annually irrigated by a well in the district?” not “what area can wells of different depths irrigate?” The area usually irrigated by a full yoked well assisted by sailáb is much the same all over the district. I put it at 30 acres. The area irrigated by a well and jhallar varies too much to allow of any good estimate being made. The time that the jhallár can be worked is uncertain.

In forming an idea of what area is on the average irrigated by unassisted wells, the first thing to be done is to banish any preconceived opinions that this area varies inversely to the depth to water in the well. As a matter of fact the areas irrigated by the deep wells of the Chiniot tahsil in the uplands between the Keráná Bár and the river have the largest areas under annual cultivation of any in the district. In the Shorkot Utár lands lying under the Bár the depth to water is $\frac{1}{3}$ of what it is in Chiniot, yet the areas irrigated are hardly half those of the Chiniot wells. Much more depends upon the quality of the soil, the number and

power of the bullocks, the rainfall, the industry of the cultivator, and the nature of the crops grown, than on the distance that the water has to be lifted. To theorise about the areas irrigable by wells of varying depths is a very different matter from the discussion of areas actually irrigated by wells in different portions of the district. I give below an estimate in acres of the area irrigated by unassisted wells in the various parts of the district :—

CHINIOT UPLANDS.		JHANG UPLANDS.			SHORKOT UPLANDS.
East of Chenáb.	West of Chenáb.	Between Chenáb and Jetch Bár.	Along Jhelam.	Between Chenáb and Sandál Bár.	
30	26	24	20	17	15

Kacha wells are only found in the Hethár near the rivers. Their irrigating power is about $\frac{1}{4}$ less than that of wells in similar situations. They are liable to dry up.

The area watered by a jhallár in a given time must be half as much again as that by a well. The water pots (they might be called gharrás) are quite twice the size of those used on wells, and the wheel on which they are strung revolves quite as fast as the wheel on any ordinary well. Besides the greater quantity of water delivered, the zemindars say that the change of water itself is a benefit to the soil. The only disadvantage appears to be a larger wastage than that which takes place in the case of wells. Where a well is assisted by a jhallár the lands attached will be almost always farmed well. A slovenly cultivator does not trouble himself to set up a jhallár.

92. The following is a list of the different pieces of the machinery of a Machinery of the persian persian wheel with vernacular name and cost to wheel.
a zemindar :—

VERNACULAR NAME.	DESCRIPTION.	COST.	OF WHAT WOOD MADE.
Manná	The kacha or brick pillars upon which the Kánjan rests.	Nil.	
Kánjan	The beam, generally an unhewn trunk of a tree, by which the horizontal wheel is supported and kept in place.	Rs. 3 to 5	Kikar, Ber, Jand &c.
Karmakra... ..	A hooked peg driven into the Kánjan. The top of the horizontal wheel is caught and revolves within the hook.	1 anna	Kikar, &c.
Bharol	The axle of the horizontal wheel.	Rs. 2	Kikar.
Bharwauní ...	The block of wood on the centre of which a small hollow is made in which the axle of the horizontal wheel stands and revolves. On the edge of the Bharwauní the one end of the axle of the vertical wheel rests and revolves.	4 annas.	

VERNACULAR NAME.	DESCRIPTION.	COST.	OF WHAT WOOD MADE.
Chakal, chakli...	The horizontal and vertical wheels, size determined by number of cogs. These vary from 20 to 32. The most useful wheels for a well of medium depth are 28 cogged. In deep wells the machinery used is heavier and stronger, and 32 cogs are the number generally used.	Rs. 32 28 25 20 15	Shisham. Ber. Kikar. Kikar and Ukánh Kikar and Píld.
Gádhi ...	The lever arm to which the bullocks are yoked, fixed on to the horizontal wheel and its axle. The driver sits on the lower end.	Rs. 1-1-0 to Rs. 1-12-0	Ber, Ukánh.
Lat ...	The axle of the chakli or vertical wheel on which the wheel 'bair' that carries the water pots is also carried.	Rs. 2 to 3	Kikar.
Manyáta ...	A board fixed on the outside of the ring in which the bullocks go round towards the well to prevent the soil falling into the well.	...	...
Jhal ...	The stout beam thrown across the well-mouth parallel to the bair and at right angles to the lat, on which the baghyár rests.	Rs. 2 to Rs. 3	Kikar. Ber.
Baghyár ...	A moderately strong beam with one end resting on the Jhal and the other on the outside of the well furthest away from the bullocks. The one end supports the Lat. In the eastern Punjab I believe this piece of machinery is not used. The well is supposed to work much more easily and smoothly with it.	8 annas to Rs. 1	Kikar. Ukánh.
Bair ...	The wheel on which the wellpots are strung and revolve. It is made up of 28 spokes 'tír,' 28 tires 'vang,' and 14 cross pieces 'phali' connecting the outer and inner tires on which the well ropes and pots rest. The whole bair is made of Karil wood.	Rs. 1	Karil.
Párchá ...	The trough into which the water first falls placed underneath the overhanging bair at right angles to the lat.	Rs. 1	Ber. Ukánh.
Nisár ...	The trough into which the water from the Párchá falls. It is placed more or less at right angles to the Párchá. The Nisár conducts the water into the reservoir Khádda outside the well.	2 annas per foot.	Ber. Ukánh. Palm &c.
Sutlar ...	A pole fixed against the well ropes to prevent them from slipping off the bair.	2 annas	Any wood.

99. On the upland unassisted wells of this district there is no system of agriculture that can properly be called rotation of crops. The two main points to be kept in mind are—1st, that on a well the area under spring crops is usually from 70 to 75 per cent of the area annually cultivated, and that three-fourths of the spring crops are wheat and barley; 2nd, that owing to

the intense heat and dryness of the climate during the hot months and scanty rainfall, the land put under autumn crops is chosen near to the well in order that the loss by evaporation may be the least possible. The difference between the irrigating power of a well in the hot and cold weather is enormous. The proportion between the area under kharif and rabi crops indicates this, and I can testify to it from my personal experience in the case of my own well. Crops that require to be liberally manured are always cultivated close round the well. The area under crop varies greatly from year to year. All other things being equal (*i. e.* the number of tenants and well bullocks), the disturbing element is the rainfall. For the autumn harvest it is the jowár crop area that contracts or expands. The cotton sowings are made long before the summer rains, and are not affected thereby. Even if good rain fell just before the time for sowing cotton, I doubt whether a larger area would be sown. The cultivator knows what hard work it often is in May, June and the first half of July to keep the cotton alive, and will rarely be tempted to sow a larger than the average area. With jowár the case is different. If there is good rain in July jowár will be sown without irrigating the land, with the knowledge that it will germinate, and the hope that rains to come will, with the aid of a couple or so of waterings about September, bring the crop to maturity. Such jowár is additional to the area usually cropped, and has to take its chance. If the later rains fail then this jowár will be abandoned. The well can only irrigate the ordinary cotton, jowár, and china area. Before the wheat sowings the turnips have to be sown. If there is rain in September and October the area under wheat will be above the average. The hypothetical well has of course a total attached area larger than the area annually under crop by at least $\frac{2}{3}$, so that there is no practical limit to the cultivation besides the known irrigating power of the well and the scantiness and uncertainty of the rainfall. If, therefore, the rainfall in September and October is exceptional, there is nothing to prevent the cultivator from putting under wheat twice as much land as usual. As a matter of fact I estimate that in the most favourable years the area sown with wheat will never exceed the average area by more than one-third. Seed is expensive, and to see wheat drying up for want of irrigation is heart-breaking. As the wheat and jowár areas increase in a year of favourable rainfall, so do they contract if the rainfall is scant. The cotton, china, turnips, and tobacco areas will vary but little in favourable and unfavourable years. I give below an estimate of the areas annually occupied by various crops on a well in Chiniot and another in Jhang :—

	KHARIF.				RABI.					Grand total.
	Cotton.	Jowár.	China.	Total.	Wheat and Barley.	Turnips.	Tobacco.	Metra.	Total.	
Chiniot.	3	4	2	9	18	2½	½	...	21	30
Jhang.	2	1½	¾	4½	9½	1½	½	½	11½	16

The area immediately round the well will be under crop every year, and a small portion will be double cropped. The area under china, turnips, and tobacco will be or ought to be always manured, and a large portion of the cotton area also. The manured area shown in the district statistics is much understated. The unmanured portion of the well estate is renovated by fallows. The more culturable land there is round the well the longer the fallow and the less frequent the crop. It is quite impossible to state that the farming is by courses. I have made repeated personal inquiries, I have examined and compared the crops for a series of years on the same well, but no system of rotation could be found. Generally speaking, it is perhaps not unsafe to say that in the year the land nearest the well is manured and double cropped, the land beyond sometimes manured and cropped once, and the lands outside bear wheat two years running and get a fallow every third year, and sometimes lie fallow two years. Ordinary instances of double cropping are as follows :—Jowár followed by wheat or barley, tobacco by jowár or turnips, wheat, cut green, by jowár or china, cotton by metra, turnips by cotton, rice by wheat.

100. The Jhang district is peculiarly rich in cattle, and the home production of manure on each well is considerable. The right to take village refuse is a fruitful cause of litigation. To many wells, flocks of sheep and goats are attached. These are rarely penned and fed on the land intended for cultivation, though instances are not absolutely wanting. They graze on the waste during the day and are driven into a sheepfold at night. Here their droppings accumulate. The manure is dug up twice a year and applied to the land. Old manure is the best, and ought to be powdery. New manure is said to be too strong and to burn. In the neighbourhood of the towns their refuse and filth find a ready market. Sheep droppings are also brought in from the Bár on camels. The only expense is the cost of carriage. In my opinion, in the case of wells cultivated with any care, one-fifth of the area under crop in the year will have been manured. I am aware that the statistics do not bear me out, but I believe my estimate based on the knowledge of what crops are grown on wells and to what extent manured, is accurate. Land intended for tobacco, vegetables, and sugar-cane is most heavily manured, see paras. 120, 121. China and turnips get a fair and cotton and wheat a small allowance. The average weight of manure given to the acre per annum is an unknown quantity, lying between 800 maunds and 50 maunds. In the Kachí soil dug out of old mounds is used as a top dressing. The earth that has collected in heaps round bushes is similarly used. I have never seen earth used anywhere else. The Kachí is poorer in cattle than any other portion of the district.

101. The quality of the sailáb or alluvial lands, naturally moistened by the three rivers, is of considerable variation. This point will be noticed at length in the Assessment chapter. Sailáb lands are cultivated in much the same way all over the district. Wheat is the favourite crop. In Chiniot hardly anything beyond a little Indian corn is grown for the autumn harvest. In Jhang some

little jowár, másh-múng and til is grown. In Shorkot the area under kharif crops is larger. There is absolutely no rotation of crops whatever on sailáb lands. Year after year the land bears its single crop—the richer soils wheat, the lighter a kharif crop. No fallows are willingly allowed, but sailáb lands often lie fallow through failure of the floods. Sometimes when the wheat-producing virtue of the soil has become somewhat exhausted, or the land has become full of weeds, a couple of gram crops are substituted. It is said that change cleans the land. I cannot venture an opinion. Másh-múng and til are never grown on well lands, nor are gram, massar and peas. The mode of cultivating sailáb lands is described in my note on each crop. Sailáb land is rarely manured. As far as I know only turnips receive a small allowance. It is supposed to burn the plants. The best sailáb lands are either those which have lately received a deposit of silt or those in islands “bela” in the river, that are not inundated but obtain abundant moisture from percolation. Flooding, unless there is a deposit of silt, is apt, if of long duration or too often, to injure and weaken the land. It also hinders ploughing. With percolation ploughing is never stopped for a day, and the tallá grass is destroyed before it gets rank. With percolation the kharif crop is assured, but with floods or a deposit of silt it is dangerous to sow kharif crops, and the land is usually kept for the spring harvest. Too much water is very nearly as much hated by the agriculturists as too little. It is not pleasant to find your house tumbling about your head, your land under water for a week, your grain stores damped and ruined, and hardly a dry place for the soles of your feet. Then this is generally followed by fever among human beings, and murrain among cattle. There is some small amount of double cropping on sailáb lands. Másh-múng especially and sometimes jowár are often followed by wheat or massar. I do not think I am wrong in stating that in 1878-9 $\frac{1}{4}$ of the Maghiána and Hasnána sailáb land was double cropped. In 1877 the floods failed, and the land was consequently fallow for the year previous to the year of double crop, and this may have tended to increase the area so cropped. Rawan and melons are at times sown after all the spring crops.

102. The only canals in this district are inundation ditches. Where land not attached to a well is irrigated the cultivation is Canal cultivation. and crops are the same as on sailáb lands, and there is no necessity to repeat what has been already written.

103. Baráni or rain cultivation is found all over the district, but except in Chiniot, the area is so small as to require no special Baráni cultivation. notice. Rain cultivation in this district might with greater propriety be called surface drainage cultivation. There is little or no rain cultivation that is not situate in a depression. Bájra, wheat, gram, moth, and til are the principal crops. No rotation of crops is practised. The slight rain-fall renders at intervals a fallow course compulsory. Ploughings are liberally given, but no manure.

List of agricultural im-
plements.

104. A list of agricultural implements is given below, with their names and uses :—

VERNACULAR NAME.	ENGLISH EQUIVALENT AND DESCRIPTION.	OF WHAT WOOD MADE AND PRICE.
Panjál, Panjálí ...	Panjál is a single Panjálí, a double yoke. The Panjálí used for bullocks working a well is one foot shorter than that used for ploughing.	Bakain is the best. JÁI and Pipal the worst. 8 annas.
Chik, Kalohra, Tad...	Different ropes, made in this district of Múnj, in others of raw hide, used to fasten the yoke to the 'gádí.'	
Hal	A plough	Shisham and Kikar, 6 to 8 annas.
Maira, Sohágá ...	A heavy flat board used to crush clods. It is dragged by a pair of bullocks, and the driver stands on it to increase the weight. It serves the same purpose as a roller in England.	Any wood. Re. 1 to Rs. 2.
Rora	A roller made of wood (not often used).	Any wood. Rs. 4 to Rs. 7.
Jandra	A drag-rake. One man holds the handle and another pulls a rope attached to the lower part. Used to lay out well beds and bank up the water channels.	4 to 8 annas.
Phalohir	A mallet. The head is curved and the handle fixed in the centre. Used to breake clods and to consolidate the slopes of water channels.	4 annas.
Karrah	A toothed drag-shovel. Used for levelling fields or making embankments. A pair of bullocks are harnessed to it. The driver presses the edge into the ground and the bullocks drag. Great quantities of earth are thus scraped up.	Any wood. 4 to 8 annas.
Kain	The same as the last, but without teeth. Used to smooth and level fields.	Any wood. 3 to 6 annas.
Kahí	A pick shovel. Used for the same purposes as a spade in England.	Wood and Iron. 6 to 8 annas.
Dátrí	A reaping hook.	2 to 4 annas.
Ramba	A hoe with a short handle, used with one hand.	Ditto.
Toka	A chopper, used to cut up Jowár and Charri.	2 to 4 annas.
Khopa	The blinkers worn by bullocks working a well.	Leather. 1 to 2 annas.
Chajj	A winnowing tray. Made of reeds... ..	Reeds. 4 to 8 annas.
Pahora	A wooden muck-scraper. Used to clean out the bullocks' house.	Any wood. 2 to 4 annas.
Mekhchú	A mallet	Any wood. 2 to 4 annas.
Tringal	A pitchfork... ..	Any wood. 2 to 4 annas.
Kubháni	A sling used to frighten away birds from standing crops.	Munj.
Tarat	A whip with several lashes, made of Munj, which is cracked to frighten away birds.	Munj. 2 to 4 annas.

105. A statement giving the names of the various crops together with Statement of the area under the area under each and the seasons for sowing and der crop at measurements. reaping, is subjoined. The crops whose areas are especially small have been classed together under the head of Miscellaneous

All soils not sailábá or barání have been recorded as Cháhi. The figures in the thicker type, below the total area under each crop, indicate the percentage of the total crop area that is under the particular crop. The total area under crop is 3,26,374 acres, of which 72·7 per cent. is under spring harvest and 27·3 under autumn harvest crops. Where the Cháhi and sailábá areas have not been ascertained, the total area is shown half way between the two columns.

CROP NAMES.			AREA WITH PERCENTAGES OF TOTAL CULTIVATION.			IN WHAT MONTHS.		
English.	Vernacular.	Botanical.	Cháhi.	Sailáb.	Barání.	Total.	Sown.	Cut.
Wheat ...	Kanak ...	Triticum vulgare ...	1,22,086	53,610	854	1,76,550	15th Octr. to 31st Decr.	15th April to 15th May.
Barley ...	Jau ...	Hordeum hexastichum.	4,842	1,175	42	54 6,059	1st Octr. to 31st Decr.	1st April to 15th April.
Gram ...	Chole ...	Cicer arietinum ...	...	12,859	893	13,752	10th Sept. to 25th Oct.	Ditto.
Turnips ...	Ság, Gongalú ...	Brassica Rapa ...	265	62	...	4 26,562	25th Aug. to 25th Octr.	15th Dec. to end of Feby.
Pea ...	Mattar ...	Lathyrus Sativus ...	...	7,799	...	8 7,799	1st Octr. to 1st Novr.	1st April to 15th April.
Lentil ...	Massar ...	Ervum Lens ...	...	2,404	...	3 2,404	1st Novr. to Decr. 15th.	Ditto.
Mustard ...	Ussú ...	Brassica Eruca ...	384	...	7	1 391	September.	15th March to 1st April.
Trefoil ...	Metra ...	{ Trigonella ? Trifolium ?	509	...	...	509	Sailab Oct. Chahi 15th Novr. to 15th Decr.	1st March to 1st April.
Tobacco ...	Tammákú ...	Nicotiana Tabacum	984	...	...	984	1st March to 15th Mch.	15th June to 15th July.
Melons ...	Vári, Váli, Kharbúze	Cucumis Melis ...	1,158	...	9	1,167	March and April.	20th May to 30th June.
Bean ...	Rawan ...	Dolichos Uniformis...	...	631	...	631	15th-30th August.	15th-30th November.
Colsa ...	Sars haf ...	Brassica Campestris	...	...	...	305	15th Octr. 15th Novr.	April.
Miscellaneous	Spring crops	...	...	...	...	21	...	...
Total area	under Spring crop	...	...	...	...	2,37,134	...	...

Cotton ...	Kápáh, vanwár ...	Gossypium herba- ceum...	27,417	319	20	28,256 9	1st April to 1st May.	15th Sept. to 15th Jan'y.
Great Millet	Jowár ...	Sorghum vulgare ...	29,335	8,756	177	32,268 12	16th July to 31st Augt.	25th Octr. to 15th Decr.
Spiked Millet	Bajra ...	Penicillaria epicata	1,140	...	705	1845 12	1st July to 15th August.	15th Octr. to 15th Novr.
	Másh, Máh ...	Phaseolus radiatus	...	8,129	90	9,019 3	August.	15th November to 15th December.
	Múng ...	Phaseolus mungo ...	...	341	80	344	...	...
	Móh ...	Phaseolus scondifol- ius ...	...	177	201	378	15th July to 15th Augt.	November.
Sesame ...	Til ...	Sesamum Orientale	...	2,956	123	3,084	Ditto.	Ditto.
Maize ...	Makkál, Makkí ...	Zea Mays ...	1,347	325	6	1,178 1	16th June to 1st Sept.	1st Sept. to 15th Novr.
	China ...	Panicum miliaceum	4,241	...	40	4,281 1	25th Moh. to 15th April.	June.
Sugar-cane	Kamád ...	Saccharum officina- rum...	223	...	...	222	16th Augt. to 15th Sept.	November.
Rice ...	Munji ...	Oriza Sativa ...	...	...	...	140	March ...	1st Novr. to 15th Feby.
Italian Millet	Kangni ...	Penisetum Italicum	98	...	...	116	16th July to 15th Augt.	1st Novr. 15th Novr.
	Sowánk ...	Oplismenum frumen- taceum.	487	...	...	487	15th May to 1st June.	15th Augt. to 15th Sept.
	Mandá ...	Eleusine corocanum	228	...	...	228	July	October.
	Kúra ...	Penisetum cenchroi- des.	4	...	...	4	April ...	15th Octr. to 15th Novr.
Vegetables	Tarkári ...	...	341	...	...	359	July ...	October.
Poppy ...	Post ...	Papaver somniferum	19	...	...	19	...	...
Miscellaneous	s Autumn crops ...	...	...	...	...	12	15th Octr.—15th Novr.	1st April.—15th April.
Total area	under Autumn crops	...	...	...	...	89,240	...	...

106. *Wheat.* The modes of cultivating wheat in the rainlands of China the sailáb lands of the rivers, and on well lands, are course very different. The chief difference is in the number of ploughings. Most are given in the case of barání lands. It is of the utmost importance to the cultivator to have enabled as much rain as possible to sink into the soil, and to prevent, as far as he can, all loss of moisture by evaporation or surface drainage. Wheat takes six months to ripen, and is entirely dependent upon the very uncertain rainfall. So as many ploughings are given to barání land as possible, and the roller is frequently used. The seed is always sown with a drill. After seed time there is nothing to be done but sit down and wait until the harvest. In sailáb lands the soil should be ploughed up as often as is possible. Talla grass springs up very fast, and the cleaner the soil the better the crop. A good farmer will often begin to plough sailáb lands in June if percolation has rendered the soil sufficiently moist, and he will go on ploughing as often as he can until the 1st Katik. High and continued floods are injurious to the wheat crop, because they stop the early ploughings. I have seen wheat sown in land that could not have had more than a couple of ploughings, and yet came up well; but such a crop is always deficient in stalk and ear. If the 'talla' is thick, very strong bullocks are required to work a plough with any effect. Sailáb lands are almost always sown by drill. In Chinot a great deal of wheat is sown broadcast. With well lands the procedure is different. If the rainfall is only ordinary, there will be hardly any land ploughed up for wheat before seed time arrives. The land intended for the kharif is ploughed first. The bullocks are probably in a very bad condition when the first rain comes, and it is generally the best policy to give them a holiday before anything is done. If when the bullocks have recovered from the effects of work during May and June, there is still more rain, then the well-owner will plough up as much land for wheat, rolling it afterwards, as he intends to sow. If there is more rain in August and September, he will give it as many more ploughings as he can. If the land has been ploughed up four or five times before seed time and is still moist, the seed will be sown broadcast, ploughed in, rolled, and ploughed again. It will be allowed to germinate, and as soon as the blades have sprung up it will receive its first watering. If, however, the rainfall has been deficient and the well oxen have been unable to do anything more than attend to the wants of the cotton, jowár, chiná and turnips, until the wheat seed time comes, there will not be a single marla ploughed up beforehand. Now the sowing time is limited, and when the land has to be irrigated before being ploughed and sown, it is the zemindar's object to lose as little time as possible. Accordingly he first irrigates the land. The seed is next scattered broadcast over the unploughed surface, and is then ploughed in and rolled. The usual number of ploughings is three or four, never less than two. I do not think wheat is ever sown by drill on well-lands, those in the Hethár that receive sailáb being excepted. In the Hethár, if the soil is moist enough, the well-lands are prepared for the wheat with almost as many ploughings as the pure sailáb lands. The seed is sown with a drill, and the irrigation beds and well channels are made afterwards. The wheat sowings begin about 15th October and go on to the end of December, but by the

With December the really good time has gone by. The amount of seed varies according to the time of sowing and the kind of soil. The earlier the sowing the less seed. The seed used per acre is for baráni lands 3 topahs per kanal, 120 lbs. per acre; for sailáb lands $2\frac{1}{2}$ topahs, 75 lbs. early, 3 to 4 topahs, 90 to 120 lbs. late; for Cháhi $2\frac{1}{2}$ to 3 topahs, 75 to 90 lbs. early, 4 topahs 120 lbs. late. On well lands in the Hethár on an average the wheat is watered three or four times after being sown, on Utár lands eight or nine times. In some exceptional years it ripens, as in 1878, almost without a single watering. In others the irrigating power of the well cannot keep the whole crop sown alive. In its infancy the wheat plant suffers from "Múlá," an insect that attacks the root, frost, and cloudy weather. Frost does not hurt early sown wheat provided it is followed by rain in the first 15 days of January. It rather strengthens the plant, but early frosts not followed by rain play havoc with late sown young wheat, as they did last year. The lighter and more sandy the soil the worse for the wheat; later on various blights, rust, and smut attack the plant. According to my experience rust is the most dangerous disease. In 1877 enormous damage was done to the wheat crop by rain in April and May, and constant cloudy weather. As a rule rust does not render the ears absolutely empty, but it shrivels up the grain to half its natural size and weight. The wheat harvest varies according to the nature of the weather. In ordinary years it begins soon after the 15th April. There are four kinds of wheat grown chiefly in this district, Chitti Rodi and Koni, Ratti Chigári, and Dandi Chigári. The first is a white beardless wheat with a long thinnish ear, chiefly grown on the upland wells in the Shorkot tahsil. The grain makes a good sample, plump and white. Koni is another white wheat with a beardless ear, which has a square unpointed end. The grain is small but whiter than the last. It does not yield well. The third is a red wheat, bearded, and is commonest of all. It is the common wheat on sailáb lands. Kál chigári, another red wheat, has a very handsome ear, thick and garnished with a beard that is black at the root. Lundi, jowári and phamban are other kinds, but they are not often met with. Good wheat is grown on the upland wells in a year of favourable rainfall. The wheat of Salará near Chiniot has a great reputation. The average outturn of an acre of wheat on well lands is probably about 16 maunds, and on sailáb 8 maunds. In the month of Mah young wheat is cut with a sickle, and sheep and goats and cattle are turned on to the wheat and it is grazed down once. The advantage of this is to strengthen the stalk, and to prevent the wheat from being blown or falling down. High wheat crops on well lands after irrigation are liable to go down before a very little wind. The yield is lessened.

107. *Barley* is appreciated for the following qualities. It ripens earlier than wheat, gives a heavier yield, requires fewer waterings, and will do well in a lighter soil. Very little comparatively is grown in this district. Gojí, wheat and barley mixed, is a crop almost unknown. The two crops are grown together for early 'kawid,' green wheat. Also any zemindár who keeps horses will have a few acres under barley to provide them with grain. With these exceptions, not above half an acre is, as a rule, grown on a well. As soon as the barley ears begin to turn colour, the tenant commences to pluck them. They are

scored and eaten. On sailáb land barley is only grown where the soil is too light for a good wheat crop. It is in such case often mixed with gram. Such barley is sometimes allowed to ripen, but more often cut green as fodder. Barley as a fodder crop is often sown with turnips on well lands, and in the Hethár also, but less frequently. The best sowing time for barley is the end of Asu and the beginning of Katik (October). It can be sown also even later than wheat. I have seen it as a double crop after jowár and máh-máng on sailáb lands. On well lands it is sown broadcast in sailáb with a drill. The amount of seed sown is much the same as in the case of wheat, from 3 to 4 topahs a kanal, 90 to 120 lbs. an acre. On well lands, land to be sown with barley will be treated with the same amount of ploughings as wheat. On sailáb land less trouble is taken. In fact barley is now, owing to its fall in value as compared with wheat, considered an inferior crop, and treated accordingly. It is liable to the same diseases as wheat in a less degree. There is only one kind of barley usually sown, called Nari. A kind of red barley is also grown. I have seen it several times both on well and sailáb. It is called 'kona kálá.' The beard is almost black in colour.

108. *Gram* is after wheat the favourite rabi crop, though as compared with wheat the area annually under crop is as 1 to 14.

Gram. Gram, it may almost be said, is never irrigated by well water. I have seen once or twice gram sown with turnips on well lands, I think in the Shorkot tahsil only, but the practice is rare. The gram too in such case is used as a fodder crop. Almost all the area under gram shown in the crop statement is sailáb. In the Utár also some little gram is grown in hollows where surface drainage collects. Gram grows best in a stiffish Utár soil, that in years of high floods gets flood water from the river, such as is found in Jhamb, Hussain Khán, and Walerai in Chiniot, and a few villages in the two southern tahsils. In the Hethár gram is sown in every description of soil, from stiff clay to sandy loam. A clayey soil suits it best, but with decent cold weather rain it does well in light loam. More gram is grown in the Shorkot tahsil than elsewhere. There the floods extend far inland, and the lands scantily inundated by the outer edge of the floods are put under gram. Two ploughings are considered sufficient, and more are very seldom given. Seed is sown with a drill, and the amount averages $1\frac{1}{2}$ topah per kanal, about 45 lbs. an acre. Very often gram only gets one ploughing, and more disgraceful farming can hardly be conceived. The seed is sown broadcast on the ground and the plough is run through once only, and then the zemindar complains that there is no yield. Gram is almost always grazed down once by cattle. In Katik the calves are turned on to the gram fields when the plants are only two or three inches high. Later on in Poh cows and horses are allowed to graze. Zemindars say that if the plant gets rain afterwards, it is not injured but is strengthened, and tillers better. The cattle too are greatly benefited by a little green food at this season of the year. The custom of grazing cattle on the green crops so prevalent in this district is probably due to the very great extent that the agricultural population depend upon cattle for their sustenance. Milk, buttermilk, and curds are articles of the commonest consumption. I have noticed above that gram is grown with barley on sailáb lands. A very common mix-

ture in the Shorkot sailáb lands is máh mung, turnips, and gram. Sometimes the gram is absent, and sometimes the turnips. The advantage of such a crop is obvious. It provides fodder for the bullocks. Mah mung and gram do very well together, and one or other usually furnishes a good crop. If the mung is good, the gram will be very thin and the plants weak and lanky. On the other hand, I have seen excellent gram crops after a thin mung crop. Gram is neither watered, weeded, nor manured. It is a very healthy strong plant if it is honestly cultivated. Once it has fairly shot up it requires very little rain. Late rain, thunderstorms, and high winds are injurious. A good downfall at Christmas, and one shower about the end of January, only are needed to ensure a first class gram crop. If there is rain in Chait, March-April, the pod and grains are generally attacked by caterpillars. In 1878 and 1877 the gram crops were very bad. In 1877 the outturn was injured by the excessive rain of April and May, and in 1878 too much rain was again the cause of the evil. I saw acres and acres of gram in 1878 in which hardly a plant was not withered and dead. The outturn of gram varies greatly. The average may be struck at about 10 maunds.

109. *Turnips* are on well lands a most important crop in this district.

Turnips. If the crop is a failure the wheat suffers. The well oxen are very heavily worked during the wheat sowings and the first waterings, and require a large amount of strengthening food. This is furnished by the jowár and turnip crops. There is nothing else. If the turnips fail, or are late as they often are, owing to the failure of the first sowings, the working power of the bullocks is materially weakened, and the area under wheat does not get properly watered. Turnips, raw and cooked, are also eaten largely by the tenants during the cold weather. To them no less than to the bullocks, a bad turnip crop is a serious misfortune. In 1877-78 the turnip crop was a failure. The zemindars say it was destroyed by 'kummí,' a kind of 'múla,' that attacked the root. The best land on the well, well ploughed and liberally manured, is allotted to this crop. The land will generally have been ploughed up after rain once before the seed time arrives. The land is then irrigated and ploughed from three to six times with one or two rollings in between, if there are any clods to be broken up. The seed is sown broadcast, mixed with sand or earth or manure. Then the soil is once more rolled, and the irrigation beds and channels are made. If the soil has now become somewhat dry a watering is given at once, but usually the first watering is given a few days after the plants have come up. When turnips are sown on well lands in soil that has been ploughed up once or twice previously a couple of ploughings are given, and then the well beds and irrigation channels are banked up. The seed is sown broadcast, and mixed into the soil with the leafless branch of a thorny tree that is brushed over the ground, and a first watering is given at once.

In sailáb lands the process is different. The land is ploughed twice or three times and rolled. The seed is sown broadcast and ploughed in with very shallow furrows. If turnip seed gets too deep into the ground it does not come up. Turnip sowings commence in Bhadron and go on to Katik. There are generally two sowings early and late. Often a third sowing is made. The

amount of seed used is one paropi a kanal, $3\frac{1}{2}$ seers an acre. The crop ripens in three months. Zemindars say turnips are not ready till the first frost. It is watered five or six times. No weeding or hoeings are given. A turnip should not be too thick, or it runs to leaf, and the bulbs suffer. A first crop is that which yields a good fodder crop of leaves first, and a heavy crop afterwards.

The turnip leaves are cut once, sometimes twice on the very best lands and then the bulbs are pulled up. On sailáb lands the leaves are not cut, but the whole plant is pulled up. The bulbs grow very large in sailáb lands. I have also seen them eaten on the ground, but this is of course very different from what is meant by the process at home. The great difficulty about the turnip crop is to sow the seed early and yet to get it to germinate well. In 1879 the first sowings failed all over the district. But little germinated, and what did, was eaten up by a kind of grasshopper—'tidda.' Second sowings did well, but suffered a little from the 'tidda.' The crop also suffers from 'tela,' blight, but never, as far as my experience goes, severely.

110. Peas, 'mattar,' are grown on sailáb lands only, and principally in Shorkot. New alluvial land, and the beds of nullas, are the spots generally chosen. It is valued as a fodder crop only. The grain is very seldom threshed for more than the seed. The pods are picked green and eaten as a vegetable. The best mattar crop I have ever seen was on an exceedingly rich piece of river silt, only a year old, in Shorkot. The land had not been ploughed. To do so when the seed was sown must have been impossible, as the soil was mud. The seed was sown broadcast, and left to take its chance. Where the silt was thick and retained its moisture, the seed had germinated freely and the crop was heavy. From this there were gradations of quality down to where the seed had hardly germinated at all. A couple of ploughings are all that mattar lands usually obtain. The seed is sown with a drill, at the end of Assu or the beginning of Katik. The harvest is in Chaitar. The plant is pulled, not reaped. The plant suffers from caterpillars that attack the pod.

111. The only other rabi crops that deserve notice are massar and a fodder crop metra, and as they occupy so small an area, my remarks will be as brief as possible. Massar is a sailaba crop, and is never sown on other soils. Either new alluvial soils or light land that is not good enough for wheat, is selected. Massar is often the first crop sown on new sailab lands, or follows mattar. The land is ploughed once or twice, and the seed is sown broadcast. One ploughing takes place after the seed is sown. Maggar Poh are the months for sowings. From 1 to $1\frac{1}{2}$ 'paropis' per kanal, or from 30 to 45 lbs. of seed per acre, is the amount used. The crop ripens in the end of Chait and the beginning of Baisákh. It is reaped, not pulled. The yield is light. It is subject to much the same injuries as gram. The pods are attacked by caterpillars. Rain, wind, and thunder are hurtful when the plant is in flower. Metra is a fodder crop. It is grown on wells and sailáb lands. On wells it is found chiefly in the Kachi circles of Jhang and Shorkot, and on sailáb in the south of the Shorkot tahsil. On well lands it is sown after cotton and sometimes

after jowár, rarely on uncropped ground. The seed is sown broadcast in the month of Maggar, is trampled into the ground and watered. The seed seldom fails to germinate. Five or six subsequent waterings are given and the crop is ready to cut in Chait. A top dressing is often given to this crop. About 30 lbs. of seed is used per acre. On sailáb land metra is sown in Assu and the beginning of Katik. Good new alluvium or a rich old clayey loam are the soils usually selected. The seed is sown broadcast and ploughed lightly in. One or two ploughings will have been given beforehand. The sailáb crop ripens about the same time as that on wells. Metra is a hardy plant, and suffers but little from disease.

112, *Cotton* is the most valuable of the kharif crops in this district.

Cotton.

It grows best on the Utár wells in a strong loam. Cotton on sailáb lands does not do well. One reason is that the mode of cultivation is more slovenly. Even on good wells in sailáb lands the crop is always lighter than in the uplands. The cotton of Shorkot grown on the Utár soil irrigated during the hot weather months from jhallars or the inundation canal, is very good. Land intended for cotton ought to be ploughed up once beforehand after the cold weather rain. It is then manured. All cotton land ought to be manured, but a good deal never is. The manure is spread and the first watering is given. If the zamindár is lazy, he sows the cotton seed smeared in cowdung broadcast. The land is then ploughed twice and rolled. If the zemindar is industrious, he will plough the land twice or perhaps three times before sowing the seed broadcast. The 'sohaga' is then put over the land twice to cover in the seed. The well beds and water channels are then made. In Chiniot cotton is sown much earlier than in the two southern tahsils. Sowings are made from the end of Chait to the middle of Jeth (April and May). About 32 lbs. of seed are used per acre. Early sown cotton is ready to pick in Bhadron. All Bhadron pickings belong to the tenant. The proprietor does not share in the pickings before the 1st Assu, and he takes nothing after the Lohí festival, the 1st Magh. There is not much left after the 15th January, but what there is the tenant takes. Very little 'mudhi' cotton is grown in this district. There is not enough rain. Cotton is hardly ever grown alone. Melons, jowár, mandúa, kangní, swánk are almost invariably found in the cotton fields, Melons are sown with the cotton. The other crops are sown later on, and are used principally for fodder. Jowár is hardly ever allowed to ripen. I cannot remember ever having seen an instance. More or less of the other three crops ripen, and the reason is that they are sown where the soil is hard and saline and not well suited for cotton. Hence the cotton is light, and the deficiency is made up by the associated crop. In this district the cotton on wells is not usually ploughed after the bushes have reached some height. The fields are hoed and weeded, and the jowár or other seed is then scattered broadcast in between the cotton bushes. A watering is at once given and the seed usually germinates. Less mandúa, kangní, and swánk are grown in Chiniot than in the other tahsils. During the hot months cotton is watered every sixth day. In the early stages cotton is liable to be injured by drought and hot winds. Too much rain is also injurious to cotton. In 1878 the rains were very favourable, and the cotton on well lands ran greatly to wood. The bushes were very fine, but the outturn

was nothing more than average. The 'tela' blight also attacks cotton. Early frosts do more damage than any thing else. Two kinds of cotton are grown in the district, but the red-leaved plant is not often seen. The ordinary country plant is the most common.

113. *Jowár* and cotton are the two kharif staples. *Jowár* is grown

Jowár.

largely on wells and sailáb lands. On the bará lands of the Chiniot tahsil its place is taken by *bája*. It is not grown to any large extent on the wells in the northern river villages of the tahsil, where makái takes its place. A recent accretion of good soil, land well manured, and soil that is clayey and has lain fallow for some years, are the three best soils for *jowár*. On the river lands the best soil for *jowár* is a light sandy loam of recent formation, well moistened by percolation. There is not very much preparation in the way of ploughing. Two ploughings are considered ample. The seed is then sown broadcast and ploughed in. The ground is not rolled unless it is cloddy. If the soil is not very moist, the seed is sown with a drill, in order to get it as deep down into the soil as possible. Sowings commence at the beginning of Sāwan, and go on to the beginning of Bhādran. The earlier the *jowár* is sown the better. It ripens before the frost, and the stalks are sweetest. *Jowár* is only sown late for fear of floods. On wells, if there has been rain and the soil is sufficiently moist, the land is prepared and sown just as Hethár land. If there has been no rain the land is first irrigated, then ploughed twice and rolled. The seed is sown broadcast and ploughed in. *Jowár* seed is always steeped in water the night before it is sown. *Jowár* is watered about every eighth day, but it is hardly safe to lay down any rule other than that it is watered whenever it begins to dry up. *Jowár* when needing water is a sure index to the quality of the soil. Where the soil is poor the *jowár* leaves shrivel up very soon, while the rest of the crop, if the soil is good, may show scarcely any signs of distress. The amount of seed sown is about 1 paropi a kanal or $\frac{1}{2}$ lb. an acre. There are numerous kinds of *jowár*. That grown near Khíva and Khánúwána has the highest reputation. The varieties usually denote little more than grades of flavour in the grain when parched or scorched. Of one kind of *jowár* the ear is compact and the grains close together, of another the ear is made up of a number of small branched stems, each carrying grain. The first is called 'gumma,' the second 'tilya.' *Jowár* is often manured. The Kachí *jowár* ripens earliest in the early part of Kátik, that grown in the Vichand next, and that on the Chenáb last, in the middle of Maggar. The two best crops of *jowár* I have seen were one in Sadkáná Miráli, a bela in the river Chenáb, tahsil Shorkot, and the other at Chakk Bandí, on a well largely assisted by surface drainage from the Bár.

Jowár is rather a delicate plant. Besides the maladies to which it is subject before it comes to ear, early frost and late rain greatly diminish the yield and render the stalks tasteless and dry. It is also liable to 'toka' and 'tela.'

114. *Bája* may be said to be grown in the northern corner of Chiniot nearest to Sháhpúr only. It is hardly ever cultivated

Bája.

on well lands. After rain a couple or three ploughings are given. The seed is sown broadcast and ploughed in. It is not

grown on wells as its stalks are not good fodder. Otherwise it has a heavier yield than jowár, and less seed goes to the acre. It is sown from 15th Har to 15th Sáwan, and reaped in Katik.

115. *Másh-Múng* are two different pulses, but they are grown together to a great extent in this district. The mode of cultivating both is the same. They are grown chiefly in the

Másh-Múng.

Hethár. There is perhaps a little more máh than múng in the Hethár. In the Utár máh is seldom cultivated, while in years of favourable rainfall large areas are sown with múng. Hardly any pulse is grown in Chiniot, and very little on the Jhelam. Most is grown in the Shorkot tahsil. Máh and múng grow well in loams and light soils. Clays do not suit. Moisture in the soil is indispensable, and but little else is required. Two ploughings is all that the soil gets in the way of preparation. The seed is then sown broadcast and is ploughed in. The amount of seed varies from 1 to $1\frac{1}{2}$ topahs of másh and from $\frac{3}{4}$ to 1 topah of múng per kanal. The múng grain is smaller than that of máh. It is sown in the end of Sáwan and the beginning of Bhadron, and ripens in the end of Maggar or a little later. The crop is pulled, not cut. Fields that have been cropped with másh-múng are usually covered with a strong after-crop of talla grass. In the Utár múng is cultivated in depressions or the beds of channels that carry off surface drainage. One ploughing or two, seldom more, are given. The seed is sown broadcast and ploughed in. Máh and múng plants suffer from the attacks of grasshoppers, 'tidda,' when young, and later on caterpillars attack the pods and grains.

116. *Moth*, another pulse, is very seldom sown in the Hethár, but after good rain a considerable area in the Utár is sown

Moth.

with this crop. Moth is an extremely hardy plant, and the zemindars say that if it once puts forth sufficient leaves to cover its root, no amount of dry weather affects it. It is supposed to be a capital grain, and the green plant first class fodder for horses. The bhúsa is also highly prized. The bhúsa of these pulses is of two kinds—'phaliát,' the broken shreds of the pods and stalks, 'pattari' the leaves. Two ploughings are deemed sufficient. The seed is sown broadcast and ploughed in. About the same quantity is used as of múng. The sowings are made rather earlier than those of másh-múng in the Hethár, as the cultivator has not the fear of floods before his eyes, and the harvest is consequently also earlier.

117. *Til* is grown in small quantities on sailáb lands and on rain lands in the upland. I have also seen it once or twice on

Til.

the outskirts of a well, and such crops are sometimes irrigated. Very little is grown on the Chiniot sailáb lands. Til loves a light soil, but requires much moisture. It will grow even on rappar lands, sand covered with only a thin layer of soil. I remember being struck with the appearance of a very fine crop near the Trimmá ghát, and then seeing the land again later on, I found that it was nothing but a thin layer of mud on a substratum of sand. Til is much cultivated mixed with other crops,—jowár, másh and múng. The land is prepared by one or two ploughings. The seed is sown broadcast, mixed with sand, in Sáwan and the early part of Bhadron. The amount used is about $7\frac{1}{2}$ lbs. The flowers are liable to be nipped and to fall off if the wind blows from the north. The root is also attacked by múlá.

118. *Makkai*. Indian corn is grown almost solely in the Chiniot taluk.

Makkai.

A few patches may be seen round Maghiana. It is grown both on sailab and well lands not in the Uda. The southern boundaries of makkai cultivation are Thatteh Bálá Rájá on the right and Tahli Mangini on the left bank of the Chenáb. The best makkai is grown in the Gilotar villages, between the Halkiwáh nullah and the river, and the villages of Salára, Kazian, and Chiniot. Makkai is not grown to any considerable extent on sailab lands. It requires a more careful cultivation. The land is ploughed up four times. The seed is sown broadcast, and is ploughed in by one or two subsequent ploughings. The amount of seed is 12 lbs. and over an acre. Makkai is generally not hoed on sailab lands. On wells, if there has been no rain, the land is watered and ploughed up twice or oftener. Then manure is put on at the rate of 320 maunds an acre. Two more ploughings are given to mix the manure well into the soil. Then seed at the rate of 24 lbs. to the acre is sown broadcast. Makkai is sown thick on wells and is thinned out, the thinnings being used as fodder. The seed is ploughed in, the land rolled, and the well beds and channels made. Makkai ripens in 2½ months. It ought to be watered every sixth day if there is no rain, and every eighth day if there is. Makkai crops on well lands are hoed twice. Makkai sowings are made from Hár to Bhadron. The sowings in the first ten days of Hár give the best crops. The preparation is the same whenever the sowings are made. Makkai takes very little out of the land, and is almost always followed by a rabi crop, either turnips or wheat. Makkai is apparently free from the attacks of the insect world. It suffers from too much rain. If rain is continuous the fields cannot be hoed, and the makkai stalk does not thicken, and but few maize cobs are produced.

119. *China* is a crop that is largely grown in this district on well lands.

China.

Two crops are reaped in the year, the first in Jeth and Hár, the second in Maggar. Land is carefully prepared and manured. Only a small area is sown with each crop. The land is first irrigated and then ploughed a couple of times. The seed is then sown broadcast and ploughed in. A rolling is given and the well beds are made. China requires a large quantity of water. Zemindars say it ought to be watered every fourth day. It is perhaps watered every fifth or sixth day. The first china crop is used chiefly as fodder. It is very rarely threshed. The second china crop comes in useful for the wheat sowings. The crop is sometimes pulled up or cut half ripe, as much grain beaten out as can be, and the straw used for fodder. More generally the second crop is allowed to ripen. It is impossible to lay down any rule. If there have been good rains and grass is plentiful, the whole of the china will be allowed to ripen, if there has been but little rain and grass is scant, the whole crop may be used as fodder. China is not subject to any particular disease.

120. *Tobacco* is, if properly cultivated, the most paying of all crops. As

Tobacco.

compared with sugar cane it sells for very nearly the same price per kanál, while it only occupies the soil for three months. It does not require any more manure or more frequent waterings. It does not exhaust the soil to the same extent. To ensure

a good crop of an acrid and pungent leaf the soil must be heavily manured, but another crop can always be grown after, either jowár or turnips. I have known both to be grown, and both turn out good crops. Vegetables, onions, yams (gwíán) china and melons are usually grown with cane. A favourite associated crop is china, which is supposed to protect the young roots of the cane from the rays of the sun and also to keep the soil cool. China so grown is always used as fodder. But these associated crops are not nearly as valuable as the crops that follow tobacco. In preparing soil for tobacco, four ploughings ought to be given, accompanied by four rollings if required to break the clods. The manure is then spread. Sheep and goats' droppings are best for tobacco. This manure is procured from the sheep cots in the Bár, and costs from Rs. 1-0 to 1-8 per six camel loads. A camel carries about 5 maunds. City refuse costs Rs. 3 a hundred borahs, containing 50 maunds. On my own well I have usually put on manure at the rate of about 600 maunds to the acre. On the wells near Jhang, where tobacco is an important crop, 100 borahs of manure are given to the kanal, about 400 maunds an acre. The manure is spread and well mixed into the soil with two or three ploughings. The land is next rolled until all clods are broken. The water channels and beds are made and the transplants are put in and a watering is at once given. The transplants are obtained thus. They may be purchased at the rate of 4 annas per square cubit or be raised by the zemindar himself. A merla of seedlings is sufficient to plant out a kanal. The soil of the seedling bed is first carefully prepared and well worked. The seeds are sown broadcast and are covered with an inch thickness of fine manure and watered. The seedling bed is covered with grass during the frosty months. Transplanting commences in the middle of Phagan. The waterings are given at first every 3 or 4 days and they gradually diminish to once a week. The first weeding and hoeing is given about 25 days after the transplanting, as soon as the plants have taken good root. Two or three hoeings are given afterwards. I have given as many as six hoeings. Three or four top dressings are given. The roots are seldom manured. The breaking-off of the young shoots from the stem (Kalli bhanna) involves much labour. The flower is also pulled off. The shoots are plucked off every fourth day for a month. If this is well done, the tobacco leaves broaden and the flavour becomes more acrid. Tobacco is cut a little, about $\frac{1}{2}$ kanal, at a time. It is spread on the ground for 3 days. The leaves are not then stripped off, but the plants are heaped on the floor of a dark room and covered with blankets or rizáis, and remain thus for a week. At the end of the week the leaves are stripped off the stalks and twisted into ropes and carried off by the purchaser. A good deal of adulteration goes on. Sajji or lime or saltpetre water is sprinkled on the leaf to make it bitter. Old bulrush mats are burnt and the ashes mixed with cut tobacco. Sand is mixed with the tobacco twists to make it weigh heavy. The tobacco plant suffers most from the attacks of the 'múlá' and 'telá' insects. The 'múlá' is a whitish-brown wooly caterpillar with a black head. The base of the stem is attacked just underneath the ground. These 'múlá' attacks often commence most inconveniently, just when the tobacco is being sold. It is then the zemindar's care to get up early in the morning and carry off and bury all the plants that have died during the night.

The more rain the worse the 'múla' attacks. Both ripe and unripe plants are attacked. Rain is only needed to wash off dust deposited on the tobacco leaves by dust-storms, or carry off the 'tela' blight. 'Tela' is worst in dry seasons. It is the product of an aphid. There is no remedy but rain. Heavy rain in May is most injurious. All the pungency of the leaf is washed out, and the weight is diminished.

121. *Sugarcane* is grown for *gúr* in the Gilotar and adjoining villages of the Kálowál iláká in the Chiniot tahsil. In Chiniot itself and Maghiána it is grown to some extent, and sold in the bazaars, but is not made into *gúr*. Sugarcane grows best in a rich loam, well manured, in or near the Hethár, where water is very near to the surface. If it is *once* flooded by river water so much the better, but floods are dangerous. Sugarcane requires constant waterings, and if, as in Maghiána, the well is assisted by a jhallár, it is so much the better for this crop. Not only does a jhallár raise more water, but a change from well to river water seems to greatly benefit the cane. There is a good deal of uncertainty about this crop, and this combined with the immense amount of labour needed and the long time that it occupies the ground, has brought it into some disrepute in Maghiána, where rice has of late years to a large extent taken its place. Sugarcane is never grown near Maghiána as a sole crop. Vegetables and china, one or other, sometimes both, always accompany it. Land cannot be ploughed too often for sugarcane, and must be heavily manured. The cuttings are planted in trenches and lightly covered over with soil, and a watering is at once given. When the cane plants are three months old, and about 2 or 2½ feet high, the trenches are filled up and manure put to their roots. At this time any other crop that may have been sown with the cane is pulled up. The cane is ready to cut about the middle of Katik, but it is often in the ground until Phagan. I have seen cane uncut in March. The crop is hoed four or five times. At first it is watered every fourth day up to the 1st Jeth or later, and once a week from that time until it ripens. The worst enemy of sugarcane is the white-ant, and constant waterings are needed to keep this pest away. Jackals are also extremely fond of cane. They chew but do not eat it. Frosts are injurious if they are early. A frost-bitten cane loses a large portion of its juice.

122. Very little rice is grown in this district. A little is grown in new silt along the Jhelum, and there is some rice cultivation on the Hethár wells of Maghiána and Jhang. The rice of the Jhelum sailáb is a coarse variety, and not much care is taken in its cultivation. The silt is not ploughed up. The seed is scattered broadcast over the surface and left to take its chance. If the silt is thick the crop is generally a good one, but if sand is near the surface, the rice dries up when the river goes down. The sowings commence in Sáwan Bhadrón. About 16 lbs. of seed go to the acre. The crop ripens in three months. This mode of rice cultivation is called 'pokh.' Another method is to transplant seedlings into these mud banks. No ploughings are given, the seedlings are simply stuck into the mud. The seedlings are grown on a well. This mode is called 'rod.' The crop takes the same time to ripen cultivated either way.

On the Maghiána well lands the soil is most carefully prepared for rice. Two or three ploughings are given and the land is well manured. Then, when the soil has been well worked, the well beds are formed, the water turned on and the transplanting done by boys. The continual bending down makes this rather hard work, and they are paid liberally. The crop is watered twice a week. The soil must on no account be allowed to dry up. Jhallárs are largely used in Maghiána to assist the wells. Harvest time is in Katik. The seedling beds are prepared and the seed sown in Baisákh and Jeth. About 2 *pai*, between 12 and 16 lbs., of seed are used for 8 merlas and the transplants given are sufficient for an acre. Transplanting is effected in Sáwan in Maghiána. Rice does not suffer from diseases. It is a crop that gives a heavy yield.

123. Kangní, swánk, mandúa and kúria are crops that are grown Kangní. Swánk. Mandúa. more or less in various parts of the district, but the Kúria. total area under them is insignificant. Swánk and kúria are seldom seen. Patches are grown on wells for fodder by zemindars who keep horses, but the grain is seldom threshed. They are grown on well lands as a kharíf crop, and require constant irrigation. Kangní is grown to some extent on the leased wells in the Government Bár to the east of Jhang. Stray patches are seen on wells in villages generally associated with cotton, rarely by themselves. Mandúa is more generally grown in the two southern tahsils. I do not remember ever having seen it in Chiniot. It is sown on stiff saline clays, and does well where other crops hardly germinate. It is a capital fodder crop, and can generally be cut twice, often three times if there is rain. In Dolowáná in the Kachí of Shorkot and adjoining villages, it is largely grown for its grain as a single crop. In other parts it is more usually found as a mixed crop with cotton. It is sown in Chait, Baisákh, and reaped in Assú, Katik. The land should be ploughed up twice or thrice. The seed is sown broadcast at the rate of $7\frac{1}{2}$ lbs. for acre. A watering should be given once a week. Mandúa, it may be worth noting, is the Rágí of Mysore. The systems of cultivation seem to be curiously different.

124. Melons are largely grown all over the district on sailáb, well, and Melons. rain lands. The rain-land cultivation is confined to the Bár, and water melons only are, as a rule, sown. Zemindars say that they grow wild in years of good rain-fall, and there is no reason for disbelieving them. In sailáb lands the seed is sown with a drill. and the drills are wide apart. Two or three ploughings are given, and one rolling last of all before the seed is drilled in, at the rate of about $\frac{1}{2}$ topah a kanal, about 15 lbs. to the acre. Sowings are made in Chait, and the fruit ripens in three months. Sowings are made at intervals. The chief melon cultivation is, however, on wells in the neighbourhood of large villages and towns. The melons of Jhang and Chiniot are exceptionally good. The lands is first irrigated liberally, but not over-manured, then ploughed and rolled. The seed is sown broadcast at the rate of about $7\frac{1}{2}$ lbs. to the acre. The seed is sometimes steeped in water and sometimes not. Young melon plants are benefitted by rain, but it is injurious later on. The first sowings are made in Phagan, but most melons are sown in Chait. Melons sown in Phagan on good cool land are not watered until 1st Chait, but the melon beds are con-

stantly hoed and weeded. Melons shown in Chait are watered regularly in the first. Well-tended melon fields near a town will be hoed perhaps 12 times. The crop is generally sold to Karars on the ground. They do the weeding and watching, the proprietor or cultivator being only responsible for watering the crop. The waterings are more frequent when the plants begin to fruit. Melons do well in a light loam. Round Jhang they are grown in a soil that appears to be but slightly removed from sand. The plant is subject to 'tela' blight and to 'hadda'. It is not very clear what 'hadda' is, but as far as I can learn the leaves are attacked by some winged insect and die, and the whole plant withers away. Rain is not injurious to melons on wells.

125. Assú is hardly grown at all in this district. In 1878, owing to the very favourable rains, a large area was sown in the Kachi wells as a *baráni* crop, and was afterwards watered once or twice. The preparation is of the roughest description. One ploughing or two are given. The seed is sown broadcast and ploughed in. The crop is used for fodder. I have seen very little land under this crop since 1878. Sowings take place in Assú and Bhadron. The crop is ripe in Chait. Assú is a hard plant, but suffers a little from worms and caterpillars.

126. The division of the crops has now to be described. After the grain has been threshed and winnowed, it is collected in one heap (*dheri*) and is divided between the landlord and tenant and Kamins. First of all the village *múllá's* fee, *rasúl arwahí*, is measured out, and next that of the village *mirásí* (*jakh*). The remaining grain is then divided between the landlord and tenant according to the rent conditions. It is measured out in topas. The last portion of the heap is not divided. It is called *talla*, and is reserved to pay the Kamins, each of whom gets what he is entitled to therefrom. The weighman generally manages to leave just enough grain to satisfy these fees, 'Kamiana.' If any grain remains over, it is usually made a present of to the tenant. Some hard landlords insist on taking their share. If the *talla* is insufficient, the deficiency is made up from the proprietor's and cultivator's heaps proportionately to the shares on which the produce is divided. Each carries off his shares and the business is finished. It is the general custom throughout the district to pay the reaper a daily wage, but in some villages he is paid from the grain heap. The normal pay of a reaper is 3 sheaves (*múha*), for every 100 sheaves reaped and tied. This would make his wage $\frac{3}{100}$ of the produce, but in reality he manages to obtain a much larger share. His wage sheaves are twice as big as the ordinary ones, and instead of one in 34 he really takes two. He also gets a bunch of ears (*trára*). In Leia the difference between the reaper's and the ordinary sheaf is recognised, and the one is called *dhárwán* (the winner), and the other *hárwán* (the loser). *Saras* and *niras*, great and small, are also the names used. If the reaper is paid from the grain heap, he takes his fee with the other Kamins. His pay is calculated at so much a day or so much a kanál, rarely at a fixed share of the produce. In one Shorkot village this latter rate is fixed at 10 topas per karwar or $\frac{1}{16}$. For cutting well wheat there is not much variation in a

reaper's rate of pay, but in the case of sailáb lands it has an upward tendency. The landlord may be anxious on the score of floods to get his grain in as early as possible, or the crop may be full of thistles and camel thorn, and the reapers cannot be got to touch it except for pay higher than the ordinary. It is the general custom throughout the district for the reaper's fee to be paid to whoever reaps, whether he be the tenant or not. I am told that in some parts of Chiniot the tenant, if he reaps the crops, gets no wages for so doing, but I am inclined to doubt whether this is the case to any extent. In Jhang and Shorkot no such instance is known.

The winnower is paid at the rate of $\frac{1}{10}$ th, 4 topahs per karwár. Winnowing is performed with a reed tray (*chajj*), and the man who winnows is called *chájji*. He is almost always a man of the sweeper (*chúra*) class. His pay is high, but it covers not winnowing only, but all other manifold jobs that he does for the proprietor during the year. The threshing (*gáh karna*) of the grain is usually performed by the tenant's bullocks, and he is not paid for this work, but if another man's bullocks are called in, he takes a regular fee (*gaheera*), or 1 or 2 topahs per yoke per day. There are some exceptions to the above rule in the case of upland wells, where there is some difficulty in obtaining tenants. A topah or a topah and a half is allowed out of the *talla* heap, half of which goes to the proprietor and half to the tenant.

127. The Kamíns proper, 'vadde Kamín' as they are called, are the potter, the carpenter, the blacksmith and the barber. Kamíns' fees. The mochi and the dhobi are not included, as they are not always paid out of the grain heap. The fees of the Kamíns proper are usually partly fixed per well and partly proportionate to the well produce. A common mode of payment is one sheaf (*púli*) + 1 bundle (*gada*) + 2 topahs per karwár. A *púli* contains about 8 topahs (15 seers) of grain, and a *gada* is half the size. The barber is paid less than the other three. His allowance is often docked of the *gada*. The carpenter generally obtains an additional fee of from 3 to 6 topahs per well on account of the sticks (*arertán*) on which each well pot is strung, that he has to furnish. The 'Chúra' is another important Kamin, but his fees are lumped as a winnowing fee (*haqq chajji*), and he is not included in the 'vadde Kamín,' Kamíns proper. There are also a number of miscellaneous fees. The weighman (*dharwát*) gets from 2 topahs per karwár to half a topah. Two topahs are the usual fee. The watchman's (*muhasil*) fee is not universal. The tenant is supposed to be responsible for watch and ward, but the proprietor often finds it profitable to have his own watchman, and if he is appointed his pay is defrayed from the joint heap. The fee varies from 2 topahs to 4 topahs per karwár. If 4 topahs, the fee becomes proprietary in character, for the landlord takes it and pays the Mubassil what he thinks fit. *Bhárá* or *kirayá* (carriage fee) is another perquisite of the landlord. It represents the cost of delivering the grain at the landlord's house. Two topahs per karwár is the average rate, but both more and less is taken. With regard to both these last fees it should be noted that they depend on the relations subsisting between the tenant and the landlord. If

the soil is good and the landlord liberal (there are landlords and landlords) the tenant does not object to his showing off by taking a heavy carriage and watchman's fee, but if the landlord is hard and the well not a very good one, both fees will be absent. The tenant often refuses to cultivate if a Muhassil is appointed. The landlord has to give way, and so indirectly recognises the right of the tenant to pilfer on a bad well. The priest (*mulla*) in charge of the village mosque (*masjid*), the boatman (*malla*), the 'well sinker' (*tobah*), the herdsman (*cherá*) are also paid small fees from the grain heap. More rarely the village bard (*piráhi*, *mirási*), the drummer (*nagárchí*), the baker (*máchi*), the proprietor's agent (*naukar*), get fees.

128. The religious and charitable fees are composed of the religious and charitable *arwaht*, usually 1 topah per karwár taken by the fees. Mulla, who looks after the spiritual welfare of the village. A small fee is often allowed in addition for the maintenance of the mosque. Almost invariably a payment, small in amount, is allowed for the support of the most favourite or nearest shrine. In some villages the allowances to shrines are considerable.

129. The allowances noted above are those paid at the wheat harvest. The Kamins get very little at the kharif. The kharif crop on a well consists of cotton, jowár and china. If the grain crops are harvested and give a fair outturn, the Kamins proper are given a little. There are certain nominal rates, but as a matter of fact the kharif Kamiána payments depend entirely on the outturn. If the jowár and china fail, or yield but little grain, the Kamins get no grain, but are allowed a little cotton instead. The rabi is by far the most important harvest, and it is the wheat crop that has to defray the Kamiána charges.

130. The Kamiána expenses on wells in this district are no doubt heavy, and it has been hinted that for calculating the half net assets they have been rated too high. Constant personal enquiry has not brought to light any reason for doubting the approximate accuracy of the estimates adopted in the Tahsil Assessment reports. It must be remembered that the maintenance of the well gear and wood work, the repairs to all agricultural implements, the supply of well pots, thatching charges and house repairs, are all included in the Kamiána. Besides their legitimate work, the Kamins have to make themselves useful in a multitude of ways. They plough if wanted, run errands, carry messages, cut wood and draw water. They are highly prized and are well treated. It is a common saying among the people, that it is better for a lambardar to be congratulated on the fact that a fresh Kamin has settled in his village than that a son has been born to him. Any Kamin settling in a new village would be given a house at once by the lambardar, or if there was not one available a new one would be at once made, the lambardar supplying the wood and materials. Village servants they are, and occasionally have to endure rough treatment and hardships, but they are a far too valuable element in the village community for the lambardar or proprietors to oppress them in any extraordinary manner. They also get in addition to

rain fees bundles of fodder from the wells in season. Most of them keep a cow or a small flock of sheep and goats. It is a mistake to suppose, as is often done, that they are a miserable, down-trodden poverty-stricken set of men. A statement is given in the Appendices, showing the Kamiāna fees taken in a river and an upland village in the Shorkot tahsil. Though there is some difference in all three tahsils, these will be sufficient to afford a general idea of the system.

131. It remains to notice the shares upon which the produce of the land is divided between the proprietor and the tenant. Rent rates. The statement below will indicate how remarkably high the rent rate in this district is. The figures are taken from Statements B. accompanying the Assessment Reports :—

TAHSIL.	TOTAL AREA HELD ON KIND RENTS.	AREA HELD BY TENANTS PAYING HALF-PRODUCE WITH PERCENTAGE ON TOTAL AREA.	AVERAGE RENT RATE OF THE TAHSIL.
Chiniot ...	61,827	33,056 53	·43
Jhang ...	96,404	76,516 79	·47
Shorkot ...	57,791	53,831 93	·49
District..	2,16,022	1,63,493	·46

I suppose there is not a district in the province where the rate of batāi is so high. On sailāb lands the rate is invariably one-half. On the better class of sailāb lands in the Jhang tahsil it is even customary to exact a small fee from the incoming tenant for permission to cultivate. I have never heard of such charges being made in the two other tahsils, but it is a well-known fact that throughout the district there is never any difficulty in procuring tenants for fairly good sailāb lands. On sailāb lands half batāi does really mean half the produce after defraying the necessary Kamiāna &c. charges. On well lands half-produce rents are nominal. With few exceptions one-third is the share of the produce taken by the landlord of china, kangni, mandūa, melons and tobacco. It is not customary for the three first-named crops to be grown together on the same well, but one or other is almost invariably cultivated. Melons, except near towns, belong entirely to the cultivator. Practically the tenant can cut as much green wheat and jowār to feed the well bullocks as is necessary. There is really no limit. Similarly the whole of the turnip crop is his. It is only where the crop or roots are sold that the proprietor takes his share ; otherwise all that he takes is a marla or two of green wheat and a bundle or two of turnips. Both china and turnips are consequently very favourite crops with the tenant-at-will, and he half lives on turnips during the cold weather. On inferior wells, where the water is very distant or the soil not good, the tenant contrives under various pretences to extort other allowances. He insists upon one or two marlas being allowed him for his spiritual adviser (*pīr*), and the same amount for his daughter's children, who are supposed to

have certain claims upon him. On some wells the tenant gets one-eighth of the proprietor's half share called *áthok*. The word *áthok* is now-a-days often used to mean allowances of this nature, though more or less than one-eighth. On others, instead of the *áthok*, a *kanál* of the standing crop is allowed. The tenant takes care that this *kanál* is the very best on the well. Jowár and barley are specially liable to the pilfering attacks of the tenants. By the time jowár ripens the tenant's stock of grain is probably exhausted, and he commences to pluck the ears and scorch and eat the grain as soon as it is ready. The stalks are chewed as a kind of inferior sugarcane. When the jowár ripens and the grain is divided on the threshing floor, the tenant, by threats and entreaties, generally manages to cajole or swindle the proprietor out of his rightful share. The same course takes place in reference to barley. The tenant begins to pluck the ears long before he thinks of dividing the produce. The women walk through the fields and pinch off the ripest ears. The earliest and latest cotton pickings belong to the tenant. If he reaps the wheat he is paid the regular reapers' wage. This is not, I believe, the general custom in the Province. There are only two portions of the district where the prevailing rent rate is other than one-half the produce. In the Halkiwah circle in Chinot and in the Utár Vichand circle of Jhang, the prevailing rate is one-third. In the Halkiwah the comparative lowness of the rent rate is due to the cultivation of the more profitable crops of sugarcane and Indian corn that require more labour on the cultivator's part. In the Utár Vichand it is due to the inferior quality of the soil and the difficulty with which cultivators are induced to take up tenancies on the wells. Taccávi is just as common in the Utár Vichand as elsewhere. A comparison between rents past and present and the discussion of the questions of taccavi advances and their effect on the rent, will form portion of the chapter on the Present Assesment.

132. There is a considerable amount of ferment in the Jhang tahsil where Karár landlords are more common than elsewhere, regarding the question of dividing *bhúsa*. Of course in the case of a tenant-at-will the matter is one of agreement pure and simple. If the landlord wants a share of the *bhúsa* and the tenant refuses to give it, the landlord can eject, and if the converse is the case the tenant can give notice. The importance of the question lies in its relation to talúqdár proprietors and hereditary tenants. On sailáb and well lands I believe that before this Settlement commenced no fixed share of wheat *bhúsa* was ever taken by any landlord throughout the district. If any exceptions existed (as they do to most rules), they were to be found in the Jhang tahsil, and there were probably special circumstances (*e. g.*, very good soil and a grasping landlord, &c.) that explained each instance. All that the landlord took was two or three large bundles (*trangars*) per holding, if he wanted them. These loads of *bhúsa* were taken at various times, not necessarily at harvest. The demand was limited by the wants of the landlord. If he had enough *bhúsa* of his own he probably took nothing from his tenant. On sailáb lands the landlord generally took *bhúsa*, but rarely on wells. It was left with the tenant on the tacit understanding that it was to be consumed on the well. It is more to the landlord's interest that the well bullocks should

well fed and strong and that his tenant should be kept in a good humour, and that he should have 7 or 8 more maunds of fodder in his bhúsa stock. This is a condition of most annual leases in England that no straw is to be sold off the farm. *Missa bhúsa*, i. e. that of másh múng and moth, is generally divided. Many instances will be found where the landlord never has taken his share of this bhúsa, but at the same time the landlord's right to take a share has never been really disputed. I am not referring to cases but to the general practice and feeling of the district. *Missa bhúsa* is exceptionally good fodder, and horses are very fond of it. Hence horse-breeding landlords usually took the same share of the bhúsa as they did of the grain.

133. Home farm cultivation is termed *hathrádh*, and a farm labourer *hathrádhí ráhak*, or *kámá*. The *licháin* tenant is not a farm labourer. A *licháin* tenant is provided with a pair of bullocks by the proprietor and takes half of the tenant's share of the produce allotted to his yoke, the other half being taken by the proprietor of the bullocks. Sometimes the *licháin* finds half the seed, but more generally he gives nothing but his labour. A farm labourer is kept in clothes and shoes and tobacco. He gets a blanket in the cold weather. His ordinary clothes allowance is 1 loin cloth (*majlá*), 1 chaddar (*utla*), and 1 turban (*pag*). As to food, if the man is a bachelor he gets his two meals a day, if married, he is allowed 4 *pái* of wheat or 5 *pái* of mixed grain,—chína, barley, gram, and wheat per month. A farm labourer is also paid never less than 8 annas cash a month, often 12 annas. He gets as much tobacco as he likes. The proprietor's barber trims his hair, and his clothes are washed by the proprietor's dhobi. From what one hears these 'Kámas' are as troublesome and grumble as much about their food as 'men in the house' on an English farm. Keeping farm servants has been very expensive during the last two years, and they did not at all sympathise with the proprietor's endeavours to economise by substituting chína and other flour for that of wheat.

134. This chapter will be fitly concluded with a notice of the agricultural qualities of the main proprietary tribes of the district. Two statements will be found among the appendices, one of which shows the total cultivated area held in proprietary right by each tribe and how it is cultivated, and the second the total area cultivated by each tribe, whether as proprietors or tenants. The cultivation of the district is carried on by proprietors and tenants in the following shares :—

CULTIVATED BY			
Proprietors.	Taraddadkars.	Occupancy tenants.	Tenants-at-will.
1,48,316	7,191	7,080	1,69,712
45	2	2	15

More than half the cultivated area of the district is in the hands of the tenants-at-will, but it must be remembered that a considerable portion of the area thus shown is cultivated by co-sharers as tenants of the other proprietors. In some portions of the district, especially where property is held on ancestral shares, a couple of sharers, or even one, cultivate a well in which their share is very small, their shares in other wells being held by other sharers. The produce of the well so occupied is taken and the revenue paid by the occupant alone. The ancestral shares are not acted on. The produce of the other wells jointly held is similarly taken and the revenue paid by the occupant-sharers. Instances also exist where the revenue is paid according to shares, but each sharer takes the produce of the joint property he occupies without reference to the proprietary shares. The Khokhar villages, north-east of Kot Isá Shah, afford many instances of peculiar arrangements of this description.

135. A talular statement is given below, indicating the amount of land held by each tribe in proprietary right and the amount of land cultivated by each tribe. The percentages are also given :—

TRIBE.	AREA HELD IN PROPRIETARY RIGHT.		AREA CULTIVATED.	
	Area.	Percentage.	Area.	Percentage.
Jats	78,976	24	1,35,100	41
Syáls	78,869	24	63,941	19
Syads	40,844	12	12,110	4
Hindús	39,553	12	21,738	7
Beloches... ..	24,396	7	19,243	6
Miscellaneous Mahomedans ...	23,403	7	20,930	6
Chaddhars	15,601	5	12,949	4
Kúraishis	13,039	4	5,574	2
Bhattis	9,316	3	5,717	2
Kamins	2,003	1	30,897	9

Jats and Syáls own nearly half the cultivated area between them, and cultivate nearly two-thirds. Besides the two tribes above mentioned, Hindús and Syuds alone hold more than 10 per cent of the cultivated area. Syáls hold but little property in Chiniot, but are strong in the two other tahsils. Chaddhars are located almost entirely in Chiniot, and so also are the Bhattis. There are no Beloch proprietors in Chiniot. Two-thirds of their property is situate in the Jhang tahsil. Syuds are large proprie-

Jhang and Chiniot. Much land is held by Jats in all three tahsils, most in Chiniot, least in Jhang. Miscellaneous Mahomedans are strong in Chiniot, and Hindús in Jhang.

36. It is difficult to give a good opinion on the quality of each tribe as agriculturists, the variations are so great. In Chiniot the Jat villages along the river bank are excellently farmed. Towards the Bár the cultivators are most inferior. In Jhang the Syáls on the Jhelam are often careful and serious cultivators. On the left bank of the Chenáb they care little for culture, and keep large herds of cattle. Some Harral villages are well cultivated, others are deserted if after favourable rain there is good grass in the Bár. On the whole the Jats are the best cultivators in the district, but even their cultivation taken round is nothing very wonderful. Naturally they are inclined more to pastoral life and cattle-lifting than to driving a plough. A Jat who farms his own land seldom farms it badly, and is a better cultivator than the Jat hit-at-will. Among the Jats the Khokhar tribe has, perhaps wrongly, been included. Some of their villages near Kot Isa Shah will compare with any in the district. The Syáls are not good cultivators. The better families have hitherto considered it dishonourable to touch a plough, but this feeling is now confined to families in affluent circumstances. Poor Syáls have to cultivate, just as other zemindárs, to earn their daily bread. In old days, no doubt, the livelihood of the Syáls who dwelt along the Chenáb depended more on their skill than on agriculture; and their wealth in herds more on their audacity as cattle-lifters than their skill as cattle breeders. Now-a-days this source of income is far less profitable. Cattle theft is still rife, but the chances of detection, where it is carried on in a wholesale manner, are too many to allow it to be adopted as a safe and lucrative calling. In old days a band of Chenáb thieves would swim a whole herd of buffaloes from the Chiniot side to Shorkot and there dispose of them. Theft now, except in the Bár, does not go ordinarily beyond a buffalo or two, or a pair of bullocks. With the decline of cattle-lifting as a livelihood, agriculture has come more into vogue. The large extension of cultivation, especially in sailáb lands, has diminished the number of cattle in many parts of the district, notably on the Jhelum, and rendered a recourse to agriculture for a living more a matter of necessity than of choice. Cattle grazing as a means of livelihood can only be profitably carried on in villages containing a large quantity of pasture land, either in river *belas* or in the Utár. On the Jhelam almost all available land has been cultivated. On the Chenáb the villages usually contain a large quantity of waste more or less suitable for grazing. Large herds of cattle are kept, and the income therefrom is probably greater than from the land. In such villages cultivation is inferior. The proprietors do not hesitate to neglect their fields for the sake of their cattle. The difference between the farming of the Syáls on the Jhelam and those on the Chenáb is very great.

Syuds are bad managers, and they hardly ever touch a plough. They are a thriftless extravagant class, about the worst bargains Government has.

Hindús.

Hindús are first class cultivators, most industrious and careful, but they cultivate but little land.

Beloches.

Beloches are a little superior to the Syáls.

Chaddhars and Bhattis.

Chaddhars and Bhattis are prosperous farmers, and are both good managers and careful cultivators.

Khojahs.

The Khojahs and the other Miscellaneous Mahomedans do not cultivate much themselves, but they look after their property very carefully, and their land is, as a rule, exceedingly well cultivated.

Kamins.

Kamins are about as bad cultivators as a landlord can get.

137. The proprietors of the district cannot be congratulated on their tenants-at-will. Those of Chiniot are best off; though even there it is no easy matter to obtain tenants for Utár and Bár wells. It is never difficult to obtain tenants for the easily cultivated sailáb lands and the wells of the Hethár. There is in fact a competition for these lands in some portions of the district. But in the Bár and especially in the Kachi circles, the tenants are a poor unsettled class, with an indifferent reputation for industry. In the Kachi this has been the normal condition of tenants for many years. Mr. Monckton wrote of them: "The non-hereditary cultivators are in no way attached to the soil; on the contrary, they are continually on the move, either from the well cultivation to the sailáb or from bad to fertile soils. Even proprietors often quit their estates to join their brotherhoods in the Khángarh district to take to the easier cultivation near canals; or else they move off to the Kacha of the Leia district in seasons when the Indus may have fertilised by its deposit a tract larger than ordinary. Even the owners show but little attachment to their properties." This is exactly what is still going on. Before the excellent rains of 1878, the Kachi had been almost deserted by tenants-at-will, and the tract had seriously deteriorated. Many wells had fallen out of work, and many villages had been given large reductions in assessment. Since, the Kachi has recovered in the most wonderful way, is still improving, and the tenants are coming back. But let another series of bad years come, and they will fly off in scores to the canals of Muzaffargarh, the sailábá of the Indus, and the labour market of Múltán. The tenant in the Bár tract is less migratory, but in seasons of scarcity he too deserts for the sailáb of the Rávi and the Múltán canals. Almost all these tenants are in receipt of taccávi advances, and the position of a landlord of assessed land cultivated by such restless persons is not to be envied.

138. In the upland villages a landlord, when he entertains a new tenant, almost always gives him an advance of money, or bullocks and seed to enable him to commence cultivating. These advances are known as taccávi. The money advances

Recorded in the Settlement Record are given below with the number of holdings and other information.

TAHSIL.	NUMBER OF		TACCAVI AD- VANCE.	LAND HELD BY TENANTS.			
	Holdings	Tenants.		Cultiva- ted.	Fallow.	Uncul- tivated.	Total.
Chiniot	361	416	15,370	2,785	480	869	4,134
Jhang	2,311	1,998	60,967	13,509	3,834	11,467	28,810
Shorkot	1,210	1,552	35,529	12,449	4,891	15,441	32,781
District	3,882	3,966	1,11,866	28,743	9,205	27,777	65,725

The amount of taccavi here shown does not include any advances except of money. The landlord's theory with regard to these advances is that the tenant cannot leave his service until they are repaid. As a matter of fact tenants very often do not pay and leave on the slightest provocation. A bad season, the loss of bullocks, better terms offered by another landlord, are each a sufficient inducement to them to leave their old masters. If a tenant does leave, the proprietor has no remedy. It is not worth while suing him for the amount due, that would be simply sending good money after bad debts. What with the capital expended on wells, the money advanced in taccavi, and the inferior quality of the tenantry, the cultivation of their lands is for landlords of upland villages in this district a most expensive undertaking. Of the area cultivated by tenants-at-will nearly one-half is held by Jats, one-sixth by Kamins, one-eighth by Syáls, and one-sixteenth by Miscellaneous Mahomedans. The large proportion held by Kamins speaks volumes for the character of such cultivation.

CHAPTER V.

AGRICULTURAL STOCK.

Stock statistics.

139. According to the Punjab Administration Report of 1878-9, the stock of this district was as below.

COWS AND BUFFALOES.	HORSES.	PONIES.	DONKEYS.	SHEEP AND GOATS.	CAMELS.
1,24,250	1,752	236	3,297	2,21,560	9,399

These figures appear to me to be open to suspicion. According to the enumeration of 1875, the last that was made for Trinni purposes, the numbers of cattle were :—

COWS AND BULLOCKS &c.	BUFFALOES,	SHEEP AND GOATS,	CAMELS.
1,27,310	29,928	2,71,011	20,162

I believe this enumeration to be nearer the mark than the one given in the Administration Report, although the difficulties attendant on numbering cattle in this district are enormous.

140. The horses of this district deservedly bear a high reputation. The mares are, I believe, esteemed by competent judges to be among the best in the Punjab. A horse fair is held annually and prizes distributed. I am not prepared to say that the fair is very popular among the people, and the Tahsildars have generally to make an energetic whip to get the zemindars in. The last fair was held in January at a season particularly disliked by the horse owners. Their horses were not in condition, and had to be taken to and from the fair ground, as no zemindar would leave a valuable mare out in a January night if he could help it. It would no doubt be better if some mares were shown with a little less flesh on, but I never heard of any one willingly showing horses in bad condition in England. Remarks of a caustic nature, not flattering to the liberality of the owner, are likely to be made. Chaff of this description is equally common among the zemindars of this district, and is coarser and more opprobrious in character, and there is nothing a well-to-do zemindar dislikes more than laying himself open to attacks of this kind. This year the fair is going to be held in the first week of November in the very middle of the wheat-sowings. The zemindars even preferred this date to one in January.

There are an enormous number of different breeds of horses recognised among themselves by the zemindars of this district. They are usually named from some particular mares of superexcellent quality, and belong to a particular family. I give a few of the best known.

NAME OF BREED.	NAME OF BREEDERS.
Harsíán	Mahomed Khan and others, Beloches of Chatta.
Phabhanán	Bharwánas of Khíva and Mukhiána.
Kajlán	Syuds of Ratta Matta.
Ghararián	Syuds of Kot Isa Sháh.
Matwallán	Liwánas of Rajánas.
Morníán	Syáls of Ahmadpur.
Jíwáníán	Aliánas of Kot Khán.

According to native opinion a mare ought not to be put to a horse before she is $3\frac{1}{2}$ years old, and there are two proper seasons, one in Chait Baisakh (15th March—15th May) the other Assú Katik (15th September—15th November). The foal lives on the dam's milk alone for the 1st month only. In the second other milk is given in addition. Camel's milk is most esteemed ; if it cannot be procured, cow's or goat's milk is given. The milk is sweetened with sugar and is given in small quantities at first ; and is gradually increased to as much as 5 or 6 seers a day. The foal is weaned when six months old from the mare, but continues to be given other milk for from 4 or 6 months longer. Gram soaked in milk is also given. Colts are allowed to run loose in the young wheat, and also given jowár and moth. Breaking-in commences when they are two years old. They are at first ridden bare-back. An amble is the favourite pace, but an accomplished mare is taught to go through many other exercises. A horse in this district is considered to be full of work up to the age of 12 or 13 years, and to deteriorate afterwards. A mare will go on producing foals until she is 15 years old. Horses are fed as below :—

PERIOD.	FOOD.
15th December—31st March	Green wheat.
1st April—31st June	Bhúsa, grass and grain.
1st July—31st August	Grass and grain.
1st September—15th November ...	Indian corn cobs, jowár, and bájra heads and stalks.
15th November—15th December ...	Missa bhúsa, jowár.

Every horse-breeder sows early half or a quarter of an acre with wheat or mixed wheat and barley to afford green food at an early date for his horses. This is ready a good month before ordinary wheat. A good deal of importance is attached to this point, and the zemindars vie among themselves to have the best and earliest *kawid*. Grain is given regularly by wealthy men, but, as a rule, ordinary zemindars only give it when they cannot get green food or fodder (*patte*). It is not given as a matter of course. To get a horse into splendid condition you stall him in a darkened shed with green wheat up to his hocks, in much the same way as fat cattle are fed at home with straw up to their knees. Boiled moth and másh mixed with molasses and turmeric is also given. The process takes 30 days and at the end of the time the horse comes out as fat as butter, and unfit to do any work whatever. The names of a horse according to age are given below :—

	To 6 months.	To 2 years.	To $3\frac{1}{2}$ years.	To $4\frac{1}{2}$ years.	To 6 years.	After 6 years.
Horse.	Bachchera.	Sarral.	} Doak.	Chaunsála.	Paujsála.	Malle panch.
Mare...	Bachcheri.	Behán.		Gho ri.		

As far as I can make out, the colours in this district are *kumál*, dark bay ; *kakka kumáid*, chestnut ; *kakka*, light bay ; *sáwá*, grey ; *nukrá*, white ; *chíná*, roan ; *garara*, piebald ; *mushkt*, black ; *kulá*, something between a light bay and a light brown.

A horse's colour ought always to be bright. Among the unlucky spots on a horse are the following : *Tará pasháni*, a small white star or blaze on the forehead. This is an abominable mark ; if the horse has a white face it is all right. *Argal*, two legs or one different in colour from the rest of the body. If they are all four the same colour it is a good point, four white stockings are good, two bad, and one very bad. *Bhawrián* are rough spots on the coat, not liked, especially if near the tail. *Nagantán*, a line of rough hair on the neck, if pointing to the front a good point, if backwards towards the rider, exceedingly bad. *Garara*, eyes of different colours.

Partnership in horses is, I believe, carried in this district to an extent unknown in other parts of the Punjab. It is called *bháwáit*. A share in a horse is called *sam*. A one-quarter share is *pair*, a one-eighth *band*, and a one-sixteenth *tankúlá*. To be partners with another man in a mare is the next thing to and very nearly as good as being his relation. I have myself heard strong objection made in Court to a witness on the ground that he and the party who called him held shares in the same horses. No rules whatever regulate the feeding or keeping of a mare held in partnership. If one of the sharers wants her he sends for her. It is a point of honour for the partner who has temporary charge of the mare to keep her in first class condition as long as he has her. If she gets into heat, he arranges to put her to a horse. A partner who rears the foal of a mare held jointly till it is two years old, is entitled to a one-quarter share in addition to his original share in the remaining three-fourth share. This is known as *haqq sámh*. A horse's hide is not used in any manufacture, and is considered worthless.

141. The camels of this district are divided into the Thal camels

Camels.

'Thalwán,' and those of the Bárs 'Bári.' The Thal camel is a much lighter beast than the Bár camel, and cannot carry so heavy a load. The female becomes in heat when 3 years old in the months of Maggar—Chait. The period of gestation is 12 months. The foal is only allowed to suck a small quantity of milk for the first fifteen days. After that the foal sucks at will, and begins to browse after 21 or 22 days. Weaning takes place when the foal is 12 months old. The udder of the dam is tied up in a bag. A camel is first loaded when 3 years old, and broken into the nose string. To start with, not more than 3 maunds is the load. A full grown camel carries 8 maunds. A laden camel will go double stages, or from 20 to 30 miles a day comfortably. Only males are, as a rule, laden, though last year one constantly saw females being used. A male camel will work 20 years, and a female bears up to the same age. A male camel of average quality used to be worth Rs. 60 and a female Rs. 80. Prices have gone up at least 50 per cent of late, owing to the demand for camels for work in Afghanistan. Sikhs and others from the Manjha buy up the surplus stock annually. A camel is not an affectionate animal. The people who ought to know say that he has not the least regard for his master, but this I doubt. A camel is spiteful and bears malice. 'Shutur

'fina' is the climax of revengefulness. The names for camels at different ages are given below :—

	To 1 year.	To 2 years.	To 3 years.	To 4 years.	To 5 years.	To 6 years.	To 7 years.	To 8 years.
Male ...	Toda.	Mazát.	{ Trihán. Lihák.	Chattar.	Doak.	Chouga.	Chiga.	Nesh.
Female.	Do.	Do.	Puráf.	Lihári.	Trokar.		Kutjeli.	

After 8 years and thenceforth the male is called *armosh* or *út*, and the female *jarot*. A camel is shorn annually, and the hair made into ropes and borahs used by camel men. The hide is worth from Rs. 2 to 3, and is made into *kuppas*, huge jars for carrying ghí.

142. The bullocks of this district are very poor undersized beasts. They are not bred with any care, and the zemindars do not purchase the high class bullocks that are bred in Sindh and Dera Gházi Khán. A bullock is put to work when 4 years old, and works well until he is 9 or 10. A bullock's age averages from 12 to 13 years.

Buffaloes are hardly at all used for agricultural purposes in this district. If a male is calved his throat is cut, and he is devoured within a few hours of his birth. Bullocks are fed from Maggar to Māgh on turnips, bhúsa, and cotton seed; from Phagan to Baisákh on green pea stalks, metra, wheat and grass; from Jeth to Katik on jowár, rawán, china, bhúsa and grass.

A bullock is called 'vachcha' to 1 year, *vahrká* to 3 years, *vahr* to 5 years, and then he becomes a *dánd*. A buffalo is *kattá* for the first twelve months, and *jota* afterwards. On the average (and a poor average it is) a bullock is worth Rs. 20 and a buffalo Rs. 15. The skins of dead buffaloes and bullocks are given to the mochis by zemindars, and sold to them by non-agriculturists. A bullock's hide is worth Re. 1, a buffalo's Rs. 2.

143. Cows and female buffaloes commence to breed when they are 5 and 6 years old respectively. The period of gestation in each case is 9 and 10 months. For the first three days after birth the calf is only allowed a little milk. The milk is then too rich for the calf's digestion. The first day's milk is called *bohli*, and that of the 2nd and 3rd *noblu*. Calves are weaned when three months old. After three months they graze, and are only allowed to suck for a few moments to please the cow. Where in the case of a buffalo the calf is a male and is devoured without delay, various artifices are used to induce the buffalo to give milk. I estimate that on the average a cow gives $2\frac{1}{2}$ and a buffalo 5 seers of milk a day. In this I include all the good, bad, and indifferent cattle that are in the district. A cow gives five and a buffalo seven calves. Zemindars will never sell milk. It is one of the district points of honour not to do so. Ghí is produced and exported to a large extent. With a good year of grass in the Bár, milk or buttermilk is worthless. It is often far easier to get than water. Hindú shop-keepers

attach themselves to all the large herds of cattle in the Bár in favourable years and buy up the ghi. It goes from Chiniot to Amritsar and Lahore, and from the southern portion of the district to Máltán and Karráchí. The following are the names for cows and buffaloes of different ages :—

				Cow.			BUFFALO.
To 1 year	...	...	...	Vachchi	...	...	Kattí.
" 3 years	...	...	...	Vahri	...	...	Jhotí.
" first calf	...	...	...	Dhanáp	...	...	Garáp.
Afterwards	...	...	...	Gái	...	...	Majh.

Cow and buffalo hides are worth much the same as those of bullocks and male buffaloes.

144. Sheep and goats are among the most useful stock of the district.

Sheep and goats.

The ewes are put to the tup when $1\frac{1}{2}$ years old. The period of gestation is six months. From one to three lambs are produced at a birth. For the first 20 days the lamb gets all the milk. Afterwards the lamb begins to browse and is only given a small portion of the milk. The ewe gives milk for four months. Lambs and kids are always kept separate from their dams. When their full supply of milk is stopped, green shoots and branches of kikar, ber, &c. are given them to nibble. Sheep are shorn twice a year, in September-October and April-May. About a ser of wool is given in the two shearings. Wool is now a very valuable commodity, and I have often heard zemindárs say that the flock-masters in the Thal wear bracelets of gold. It mostly goes down to Kurrachi. I give the price of Bár wool and also of goats' hair at Maghiána for the last twenty years in rupees per maund. Thal wool is cheaper.

		YEAR :																			
		1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880
Rupees per maund.	Wool ...	8	10	12	11	10	9	7	8½	9 8½	8½	10	12½	4½	10	10	9	10	12	18½	
	Hair ...	5½	5½	5	5½	5½	5½	4½	5	5	5 1½	5½	5½	5½	5½	9 6½	6½	8	9		

Sheep skins are used for making women's shoes, covering saddles, &c.

As far as age at which put to the he-goat, number of kids produced, and method of rearing, there is hardly any difference between sheep and goats. A goat gives from 2 seers to $\frac{1}{4}$ th seer of milk a day. Nothing is made from the milk. A goat is usually killed when 5 or 6 years old. Sheep and goats produce about five times. Goat's hair is shorn every six months and is made

into pannier bags, saddle bags, ropes, nose bags, salitas &c. It is called 'jat'. The names of sheep and goats according to age are given below :—

	SHEEP.		GOATS.	
	Female.	Male.	Male.	Female.
To 6 months	Lelf ...	Lelá ...	Bakrá, Pathora ...	Pathorí.
To 1 year	Gharáp ...	Gharápi ...	Chilát	Kharápi, Kharáp.
Afterwards	Ched ...	Chhatra ...	Chhela	Chhellí.

The donkeys can hardly be called agricultural stock. No zemindar owns one or would ride on one. They belong to Karárs and Kamíns, chiefly *mochis*. They are used to carry manure from the sheep-folds on to the land, and in various other ways. I do not think the donkey of these parts differs to any extent from a donkey of the most ordinary description.

CHAPTER VI.

PAST FISCAL HISTORY.

145. Before the year 1831, when the Múltán province was entrusted to the management of Sáwan Mal, Jhang can scarcely be said to have had any fiscal history. The Syál chiefs of Jhang apparently took in kind one-quarter of the produce upon much the same lines as Sáwan Mal did. The story that there were 1,25,000 wells at work during the reign of Walidád Khán, and that all the assessment taken was only Re. 1 or a blanket per well, is probably a mere myth. Walidád no doubt, did, by moderate assessments and fostering measures, give a great impetus to cultivation, but I doubt whether his collections were of that exceeding mildness for which they are given credit.

146. Of the administration of Sáwan Mal Mr. Monckton wrote :
 Preliminary.
 Sáwan Mal's administration.
 "After the breaking up of the Moghul empire the southern portion of the Panjáb appears to have fallen under the rule of petty Mahomedan chiefs. Ranjít Singh on conquering the country made over the administration to a Hindú named Sáwan Mal. He organised afresh the revenue system, and fixed the tax on the land actually under cultivation according to the nature of the crop grown. It was simply an excise on agricultural produce, levied in the form of an average tax in money or a fixed proportion in kind, according to the choice of the zemindár. On 1st class crops, as tobacco, sugar, poppy, money rates were invariably charged, and no option was allowed. Fallow land and

fodder crops escaped tax entirely, as also corn ate down green by cattle engaged in agriculture. Persons desirous of embarking capital in the construction of new wells or the repairs of deserted ones, were encouraged by the grant of leases for periods of 20 years on a fixed cash payment of generally Rs. 12. This lease, however, only protected a limited extent of land, usually 20 acres (20 bighas?), and did not cover first class crops from the special taxes to which they were held subject under all circumstances. Special indulgence to encourage the investment of capital on agriculture was also bestowed in the form of *Inám Taraddadáná*, which may be translated as 'grants in reward for cultivation,' e. g. a man of wealth and influence would engage to sink eight new wells and found a village on condition of receiving in rent-free tenure one well. But as it was found that the cultivation of this well was unduly increased to the detriment of the public revenue, the 'Jhol' tenure was introduced. By this the grantee was entitled to claim exemption for no particular well, but for a rateable deduction on all his wells, and in the case we have supposed would receive a remission of one-eighth on all his land." *Sáwan Mal* took both in cash and kind. Collections in kind were almost invariably made by *Kankút* or appraisement. Nominally the Government share of the produce was half the proprietor's share of the produce, the latter being almost invariably one-half. I do not mean to assert that the local government never took more than one-fourth. The appraisement of the one-fourth crop was made by Government servants, and there was nothing to prevent their over-estimating the Government share of the produce until it became really half produce, or more. It was in this way that the Sikh Government never allowed any middleman between itself and the actual cultivator of the soil. Very often the only limit to public taxation was the inability of the cultivator to pay more. The following are a few instances of the cash rates paid *per bigha*:—wheat Rs. 1-12 to Rs. 2; barley Re. 1 to Rs. 2; tobacco Rs. 8; cotton Rs. 1-12 to Rs. 2-12; Indian corn Re. 1 to Rs. 2; jowár Re. 1 to Rs. 2; sarshaf Rs. 2 to Rs. 5. Besides these rates there were a host of fees and cesses known as *abncáb* taken in addition. The following are some of the more important. *Iktála*, an extra ser, the 41st taken in the maund; *wazn kashí, tiká* and *mukaddamí*, cash payments per well at each harvest; *karáwa* and *mohassilí*, the pay of the man who watched the crop in the interests of the *Sirkar*. Fines were also continually levied. The only persons who were safe from these exactions were persons from whom nothing could be squeezed. Liberal remissions were, however, allowed for crops that did not mature or turned out very patchy, under the name of *kharábá*. The revenue system of *Sáwan Mal* was essentially fluctuating. It adapted itself to the vicissitudes of the seasons. Whether the harvest was good or bad, enough was left over to the cultivator to live upon. In itself the demand was heavy, but its elasticity prevented it from becoming oppressive. Under a good Sikh Governor the cultivator of the soil was looked upon as a Government tenant with certain rights of occupancy. So long as he went on cultivating his land and allowing himself to be annually squeezed, the State took great care of him and was always ready to assist if he got into difficulties, either through loss of cattle or with the village *baniah*. Ejections, except at the order of the *Kárdár*, were unknown, and the *Kárdár* seldom exercised the power. Whether a well paid

revenue in cash or kind, the collection was suspended as soon as it fell out of work, and, on the other hand, new wells were at once brought on the rent roll. All the protection allowed to a new well was a remission of $\frac{1}{8}$ th. In the case of *sailáb* lands it was usual to exact a *nazrána* payment from the applicant who wished to obtain a grant of land for purposes of cultivation. In sanctioning these grants not the least respect was paid to old proprietary rights, if such existed. The valley of the *Chenáb* in *Sáwan Mal's* time was in many parts an impenetrable jungle, and there are so many riverain villages, whose foundation dates from that time, that no rights of individual property could have existed. Men of influence obtained for the payment of a small sum the exclusive right to cultivate large blocks of land, and these grants have now become villages. The State took her share of the produce as soon as the lands commenced to bear crops. It is rather difficult to form any very clear idea as to the degree of the severity of the Revenue demand in *Sáwan Mal's* time. It varied with the mood of the local Governor. *Mál Ráj*, who was for some time in charge of *Jhang*, was most tyrannical and oppressive in his exactions. The rule of the other *Kárdárs* was milder. The greater prevalence of *Háthrakhái* tenures around *Jhang* shows that the demand was heavier close by the head-quarters of Government than elsewhere. In the more remote parts of the district it was perhaps more difficult to enforce a heavy demand and less was taken. The worst point of the Sikh rule in the eyes of the agriculturist was that the *Kárdárs* never hesitated to impose arbitrary fines whenever they found that a man had contrived to save money in spite of the land revenue demand.

147. The only portion of the *Jhang* district not included in the *Múltán* province was the *Kálowál ilaka*. Here *Rájá Ghúláb Singh* was generally the farmer of the revenue, though *Sáwan Mal* held the farm for one or two years. Mr. Ouseley thus describes the Revenue Administration:—"They collected their revenue by '*batái*,' (division of the harvest when reaped and threshed,) or by '*Kankút*' (appraisement of the standing crops, or by under-letting a few villages here and there for a certain cash payment to some person possessing a little local influence, who again made his own arrangements for collecting his rents according to one of the above described modes. As the principal lessee held his lease subject to renewal annually, of course any contracts entered into by him were only for a similar period." The fiscal administration of *Rájá Ghúláb Singh* is still execrated by the people as the acme of extortionate taxation. The instance of his rapacity that they are most fond of quoting is his device of taxing not the land but the plough bullocks at the rate of Rs. 25 a yoke. The consequence was that the people abandoned their holdings and the land became desolate. But the tax collectors shewed themselves equal to the occasion, and if they found that the cultivators of a well had fled, they promptly ascertained who the *Kamíns* were and fleeced them.

148. The first Summary Settlement of the tract now included in the *Jhang* Settlement, was made by Mr. Cocks in 1847-48, the *ilákás* of *Garh Máharájá* and *Ahmadpúr* being excepted. This was before annexation. "Before the

The *Kálowál ilaka* under
Ghúláb Singh.

The 1st Summary Settlement of Mr. Cocks.

treaty of Bhyrowál the British Government undertook to maintain the authority of the Lahore Darbár, and to administer the affairs of the Punjáb during the minority of the young Mahárájá Dalíp Singh. Officers from the Company's service were selected to carry out a Summary Settlement of the land revenue." The Jhang district had been occupied in 1846 by the Darbár during the contest between the Lahore Government and Múl Ráj, and when peace was made it was retained, although it had heretofore formed a portion of the Múltán province and been held by Sáwan Mal. When Mr. Cocks made his Summary Settlement, the two excepted ilakás were included in the Múltán territory administered by Múl Ráj.

The statement below gives some statistics of the 1st Summary Settlement,—

TAHSIL.	WELLS AT WORK.	CULTIVATION.	JAMA.
Chiniot	Statistics wanting.		82,863
Jhang	3,490	75,149	1,21,519
Shorkot	2,117	37,615	68,356
Total	...	...	2,72,738

The only really trustworthy figures are those of the jamas. Mr. Onseley says : "The assessments were based on the Sikh returns on which a reduction of 20 per cent was allowed." Mr. Monckton writes : "The jama was assessed on a reduction of from 10 to 15 per cent on the previous average collections." As the Sháh-púr assessments were higher than those in Jhang, both quotations are probably correct of the districts to which they refer.

149. The best opinion on the 1st Summary Settlement available is that of Major Hamilton, recorded in the District Revenue Report for 1851-2 : "The settlement of this District was made by Mr. Cocks for a period of three years from 1847-8 to 1849-50. The records of this settlement have been lost, but it is understood to have been made on liberal principles and on data drawn from the actual proceeds of the lands for a series of years. On the expiry of Mr. Cock's Settlement it was continued for an indefinite period with permission to the Málguzárs to resign their leases on due notice if dissatisfied with the arrangement. During the first year the arrangement was generally tacitly agreed to, but in the year under report nearly the whole of the Málguzárs in the district have professed their inability to discharge their engagements on existing terms. Annexed is a table showing the average price current of the chief articles of produce of this district at four different periods. First for a period of eight years prior to Mr. Cock's Settlement ; 2nd, the time of Mr. Cocks Settlement ; 3rd, the year 1850-51 ; 4th, the year 1851-52.

Note.—This table cannot be found. The price of wheat is given below.—E. B. S.

YEAR.	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853
Seers of wheat per Rupee.	29 $\frac{3}{16}$	30 $\frac{2}{16}$	33 $\frac{1}{16}$	33 $\frac{2}{16}$	37 $\frac{4}{16}$	24 $\frac{1}{16}$	38 $\frac{3}{16}$	48	63	62

It will be observed that during the period of the Settlement the value of the agricultural produce had risen considerably, and this seems to have enabled the Málguzárs to meet their engagements, notwithstanding many adverse circumstances. In the year 1850-51 the value of produce had fallen not only below the average of the three preceding years, but was even considerably below the average of the period prior to the Settlement. The increase of cultivation consequent on the restoration of tranquillity, would, however, gradually counterbalance the loss, and except where land had become extensively waste, the Government demand would not press hard. During the past year, however, the fall in prices has increased at a still greater ratio; and the rates for that year are on the proportion of about 3 to 5 when compared with those of the period preceding Settlement, and it must be obvious that after making every allowance for the lightness of the Settlement and the increase in cultivation, the same amount of revenue cannot be demanded with the hope of realisation, and without distress to the cultivating classes. Besides the fall in value of agricultural produce, other circumstances have combined to impede the realisation of the revenue. Among these is the extreme abrasion of cultivated lands by the encroachments of the rivers which has taken place during the last two years." "Since Settlement in many villages cultivation has decreased. This has chiefly arisen from the distracted state of the district during the war, when each party being alternately paramount, mutual injuries were inflicted. The cultivation was laid waste or abandoned, the machinery of the wells destroyed, and the cattle plundered. Numerous emigrations of cultivators to safer localities occurred, and the scanty population of the country did not afford the means of supplying their place."

150. In the Revenue report of the following year Mr. Monckton wrote: "Mr. Cocks settled the land revenue on the most lenient, I may say, almost indulgent principles, yet under our rule cultivation has diminished, collections are made with increasing difficulty, a portion of the demand for 1851-52 was remitted, and a very large portion of that for the year under review was suspended pending Settlement, yet the collection of the remainder was effected with great difficulty, and the number of *dastaks* increased from 1,910 to 3,304. I have observed too that the decrease in cultivation and the difficulty of collections has occurred in many villages which were by no means heavily assessed, while in a few there has been an increase of cultivation. These anomalies I attribute to the inapplicability of our system as applied to this district; that the capabilities of the *sailábá* lands in the *Hethár* vary so greatly according to the extent of the river flood, that no assessment can hold good for several years together: that the extent of well cultivation varies according to the means of the owners or the migration of cultivators to such an extent, that even an originally light assessment will often become intolerable; that the variety of castes is such that to enforce a joint village responsibility is a positive injustice; and finally, that proprietary rights in the soil are so ill-defined that much valuable land is lying waste from this cause alone." The causes assigned by Major Hamilton were probably most active in bringing about the break-down of the first Summary Settlement

but the circumstances enumerated by Mr. Monckton cannot have been devoid of considerable effect. Mr. Cocks' assessment was undoubtedly, judged by the cash assessments of to-day, both severe and heavy. It was paid for two years because prices were high. Then came the Múltán rebellion. Peace was, however, restored in a short time, and with tranquillity came an enormous fall in the value of grain. The assessment of no district, however fertile, could, I conceive, bear up against two such forces as these, the assessment being inherently severe. The inapplicability of our revenue system to the Jhang district, and the other causes mentioned by Mr. Monckton, no doubt had some share in rendering the payment of Mr. Cocks' assessment impossible, but they were not the chief factors, or their influence would have been felt sooner.

151. Mr. Ouseley's account of the working of the Summary Settlement is the same as that of Major Hamilton. For 1848 and 1849 the collections were made without difficulty. In 1850 a few balances remained. "But towards the close of 1851, a great cry of distress arose throughout the district, and it was considered absolutely necessary that a remission of the demand should be at once effected." The distress was greatest in the Kálowál tahsil.

152. Between the 1st Summary Settlement of Mr. Cocks and the second Summary Settlement, annexation took place, and the newly conquered territory was partitioned into districts and divisions. At first the Jhang district, compared with the present boundaries, contained the Farúka talúqa in the Jetch Doáb, transferred to Sháhpúr in 1854, and a considerable strip of country on the right bank of the Ráví, between the present boundary and that river, transferred to the Múltán district about the same time; and did not contain the Garh Máharájá and Ahmádpúr ilákas transferred from Muzaffargarh in 1861 and the Kálowál iláka transferred from Sháhpúr in the same year. The existing division of the district into the three tahsils of Shorkot, Jhang, and Chiniot dates from this period.

153. The old fiscal divisions of the Sikhs were to a certain extent retained within the tahsil boundaries. The old tahsils were three besides the Peshkári of Uch. Chiniot was much the same as it is now, minus the villages that came over from Shahpur. Tahsil Jhang lay on the left bank of the Chenáb, and included the country from the Chiniot boundary down to the Ráví and also the lowest portion of the Vichand, known as the Massan taluka. West of the Chenáb was the Peshkári of Uch, bounded by the Garh Máharájá ilaka on the south and extending up to the right bank of the Jhelum to a few miles beyond Máchíwál. The Kádírpúr tahsil contained the remaining country on the right bank of the Jhelum and between the Jhelum from the Massan talúka to the Sháhpúr boundary. The sub-divisions into talukas were as follows in the old Tahsils :—

<i>Chiniot.</i>	<i>Jhang.</i>	<i>Kádirpúr.</i>	<i>Uch.</i>
Saprá	Wára	Mári	Chountra.
Chiniot	Jhang	Kot Shákir	Uch.
Kurk	Gilmála	Kot Isa Sháh	Nekokára.
Bhowána	Shorkot	Kádirpúr	
Kálowál	Massan	Bharmí Wára	
Ahmadanaggar		Sháh Jíwana	
Lálián.		Bhattián	

Among the maps will be found one in which these divisions are delineated.

154. The second Summary Settlement was made by Major Hamilton and Mr. Monckton in Jhang, and in the Kálowál iláka by Mr. Ouseley. The demand for the Kálowál tahsil was first revised by Mr. Thornton, the Commissioner, at the close of 1851, and a reduction of 25 per cent given, and again in 1853 by Mr. Ouseley. It is Mr. Ouseley's figures that are given here. The results are tabulated below :—

TAHSILS.	WELLS.	CULTIVATION.	JAMA.
Chiniot	No statistics		61,246
Jhang	3,296	49,942	1,02,858
Shorkot	1,903	29,911	58,988
Total	...	...	2,23,092

The reduction given amounted to 18 per cent, or roughly speaking to half a lách out of 2½ lakhs. The revision of the first Summary Settlement was commenced by Major Hamilton, who took up first the cases of villages that needed more immediate attention, and finished by Mr. Monckton. Mr. Monckton writes of this Settlement : "Elaborate Khasrahs were prepared and minute statistics collected regarding each village. The decrease in the number of wells is an indubitable proof of the decline in the resources of the district. The extraordinary and disproportionate decrease in the area under cultivation is open to the suspicion that extensive frauds were perpetrated in the measurements. The revenue was collected during this Settlement with tolerable punctuality, but many estates were found going to decay, not from the pressure of the land tax, but from the want of co-operation among the sharers." The area statistics given for this Settlement are utterly untrustworthy, and the measurements must have been both rough and dishonest. The relief given was on the whole beneficial, but was in cases partial. Judging from the assessments of the Regular Settlement, the reductions were perhaps unnecessarily large in Kádirpúr and Chiniot. The report on the second Summary Settlement of the Kádirpúr tahsil was written by Mr. Monckton, and it is amusing to read that he adopted uniform rates for irrigation varying, according to the distance of water from the surface, from Rs. 2-12-0 to Rs. 1-12-0,

and that his average rate was Rs. 2-6-0, while the *sailáb* cultivation on the *Chenáb* was charged at Re. 1-4-0, and on the *Jhelam* at Re. 1-4-0 and Re. 1-8-0, and that he was convinced "that higher rates may be obtained in a Settlement for a longer period, especially if the liabilities of each well owner are clearly defined." This was written in 1853, and three years later his highest assessment on well lands was Re. 1-8-0, and on *sailáb* lands Re. 1-2-4.

155. In *Kálowál*, when the first Summary Settlement had broken down utterly, the revision was effected in three days by the Commissioner Mr. Thornton, and the demand reduced from a lakh to Rs. 75,000. "This assessment was, humanly speaking, the means of speedily restoring an almost ruined and deserted tract of country to a flourishing condition." In 1853 Mr. Onseley again revised the *Kálowál* Settlement, which resulted in a further decrease of Rs. 12,000 in the tahsil revenue, i.e. from Rs. 75,617 to Rs. 63,738. The revised assessments were collected with ease until the Regular Settlement.

156. The Regular Settlement of the *Jhang* district was at first entrusted to Mr. Morris, Settlement Officer, *Gújránwála*, and Mr. Izzat Ali, one of his Superintendents, was deputed to *Jhang* in November 1853, to arrange for the demarcation of the village boundaries. During the cold weather Mr. Morris made a rapid tour of inspection through the district, and apportioned out their work to the different establishments. In April 1854, when only a portion of the *hadbast* (adjustment of boundaries) work had been done, Mr. Monckton took charge of the Settlement, and he remained in charge until the conclusion of operations in the early part of 1857.

The first business of the Regular Settlement was the determination of what land belonged to the State and what to individuals, and the demarcation of the tract belonging to individuals into villages. There were apparently no disputes and no difficulties in defining the boundaries of the Government waste. The zemindars instead of meditating encroachments on the State lands, in many instances threw up land that undoubtedly belonged to them, so fearful were they of the responsibilities that had hitherto attached to proprietorship of land. The adjustment of the village boundaries was a work of some magnitude, not unaccompanied with difficulty. I have already described the state of proprietary right as existing at annexation, in Chapter III., and the effect of this demarcation in bestowing proprietary rights on the villagers in waste lands now included within their village. The village boundaries having been fixed, the field survey was commenced and "conducted on the regular *Panjáb* system through the agency of the *Patwaris* of the District." Mr. Monckton gives a long account of the system under which the measurements were made. He states that the "maps thus produced stood the test of verification with the survey village plans with surprisingly slight discrepancies." I am not prepared to go to the length of saying that the measurements were very good. From my own experience I can testify to the existence of numerous inaccuracies. At the same time no serious inconvenience has ever resulted from the presence of these errors.

157. The data on which Mr. Monckton based his assessments were (1) the measurement of the cultivated area ; (2) the amount of fallow and culturable waste ; (3) soils ; (4) produce estimates ; (5) classification of wells ; (6) personal inspection ; (7) population statistics ; (8) the number of yokes of well oxen ; (9) past fiscal history ; (10) assistance from zemindars. Mr. Monckton's remarks on the various data are well worth reading, but only a short abstract of his opinions can be given here. The measured cultivated area was the ground work of the assessment, though implicit reliance could not be placed on the returns because in some villages cultivation had been purposely kept under, while in others, owing to the action of the rivers, the area had been increased or diminished. The estimates made upon the area returns were modified by the consideration of the amount of culturable waste existing in the village and the quality of the soil. Produce estimates, classification of wells, and the returns of the yokes of well oxen were of no assistance as the statistics collected were inaccurate and worthless. Population statistics were weighed, but apparently it was possible to argue both ways, and, as Mr. Monckton writes, "the entire subject required much discrimination." Considerable assistance was derived from local opinion as to the relative capabilities of the villages in a talúka or circle, and this combined with the personal knowledge possessed by Mr. Monckton of the working of the Summary Settlements went, I believe, further than anything else to modify the estimate based on the cultivated area. That Mr. Monckton trusted greatly to his knowledge of what the village had been hitherto paying, and whether with ease or difficulty, is sufficiently evinced by the statement below, giving the highest and lowest incidence of his actual village assessments in each of the tahsils on the cultivated area and the rates adopted :—

		CHINIOT.				JHANG.				UCH.				KADIRPUR.											
		Assessed.		Rates.		Assessed.		Rates.		Assessed.		Rates.		Assessed.		Rates.									
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.									
Highest	...	1	11	6	1	6	0	2	2	0	1	8	0	1	7	8	1	10	3	1	8	0			
Lowest	...	0	8	0	0	14	0	0	10	4	1	2	0	0	7	7	0	13	0	0	7	1	0	10	0

The rates assessments are the rates on well irrigated lands. There can hardly be a better test of an assessment, than the deviation from the average rates indicated in its incidence on the cultivated area in the case of different villages. The variations in the value per acre of the produce and the profits of farming in different villages are enormous, as every one knows, and arrange our circles, our soils, and our rates as we best can, the general results of modern assessments are that the best villages get off lightly, and the worst pay, produce for produce, the heaviest tax. The same thing takes place in the internal distribution of the jama also. Where the assessing officer knows his villages, and is not afraid to assert that knowledge, the results will invariably be found in the assessment of some villages much above the rates and of

others much below. Besides the data above mentioned, Mr. Monckton divided the district into Assessment circles, the rates being differentiated to agree roughly with the quality of the cultivation in each circle. The principle upon which the circles were arranged were uniform for the whole district. The tract under assessment was everywhere a narrow strip of land lying between a river and the high-lying uplands of the Bár or Thal. Cultivation was easiest and least expensive near the rivers, most laborious and requiring most capital in the uplands alongside the Bár or Thal. Consequently the riverain villages were collected into one circle and those under the Bár or Thal into another. What villages remained situated between these two were formed into a third or intermediate circle. The names of the circles were River or 'Hethár,' Centre or 'Wasat,' and Upland or 'Bár.' For each of these circles different rates of assessment were framed for the three descriptions of soils—cháhi, sailáb, and barání, classed according to the sources from which each obtained the moisture necessary for the growth of crops. There were no distinctions between cháhi, cháhi-sailáb, cháhi-jhallári, &c. lower below the rates assumed for the various circles in each tahsil :—

TAHSIL.	RIVER.						CENTRE.						UPLAND.																										
	Cháhi.			Sailáb.			Barání.			Cháhi.			Sailáb.			Barání.			Cháhi.			Sailáb.			Barání.														
	Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.		Rs.	As.													
Chiniot	...	...	...	1	6		1	6		0	8		1	2		1	2		0	8		0	14		0	14		0	8										
Jhang	...	...	...	1	8		1	0		0	8		1	6		0	14		0	8		1	2		0	10		0	8										
Kádírpúr	...	...	}	Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.			Chenáb.								
				1			2			1			0			0			8			0			10			0			8								
				J			hela			m.			J			hela			m.			J			hela			m.			J			hela			m.		
				1/8—1/6			1			2			0			8			0			14			0			14			0			8					
Uch	...	...	...	1	6		1	0		0	8		1	0		0	14		0	8		0	13		0	13		0	8										

The financial results of Mr. Monckton's Settlement, classified tahsil by tahsil, according to existing arrangements, are given below :—

	CHINIOT.	JHANG.	SHORKOT.	TOTAL.
	Rs.	Rs.	Rs.	Rs.
Jama	33,995	1,13,246	58,147	2,05,388
Incidence on cultivation...	0-15-8	1-1-2	1-1-0	...

158. The Regular Settlement of 113 villages in the Chiniot tahsil on

The Regular Settlement.
Kálewál.

the right bank of the Chenáb was made by Mr. Ouseley. Mr. Ouseley's Memo on the Regular Settlement will be found at pp. 59-76 of the printed Sháhpúr Settlement Report. An abstract only will be given here, though the whole of the memorandum deserves careful perusal, and those portions of it that have to do with the considerations that guided Mr. Ouseley in fixing the village assessments are especially replete with the most valuable suggestions to a Settlement Officer. The Settlement was commenced in 1854, under the direct management of Extra-Assistant Mahomed Bakhsh, subordinate to the control of Mr. Temple, the Deputy Commissioner and Settlement Officer of Gujrat. Subsequently Mr. Ouseley was placed in charge, and Mr. Thomson, Extra Assistant Commissioner, was added to the strength of the Settlement staff. The first step was the demarcation of boundaries. This business was effected without trouble in the well-cultivated tracts, but was attended with great difficulties in the Bár. It is not necessary to give any further notice to Mr. Ouseley's description of the obstacles with which he had to contend in the demarcation of the boundaries of the Bár villages, as all the Bár round Kerána, that was transferred to Jhang in 1861, has become, it is not known exactly how, Government property. Investigations in the case of the villages Asiánwáli and Hadda with regard to their claim to a large area surrounding their hamlets, on the ground that it had been allotted to them by Mr. Ouseley, proved beyond a doubt that the boundaries had been fixed and a field map made during the Sháhpúr Settlement: The flaw in this case was that the papers, though prepared, had never been attested. All the documents, lists, and statements that are usually prepared at measurements were extant, but the matter never got beyond this stage. What took place, I take it, was this. It was an integral portion of the Jhang district land revenue and Trinni system, that all the waste lands in the Bár were the property of Government, and naturally the Jhang officials saw no reason for treating the Kerána Bár in a different manner. A great part of the tract transferred was unclaimed Government waste, and in respect of the portions claimed by individuals it was argued that no proprietary rights had as yet been conferred and that there were no reasons why these claimants, who mostly belonged to the villages nearer the river and were mere temporary squatters in the Bár, should be regarded as having other or greater rights than their brethren in the Sándal Bár. The result was that as in the Sándal so in the Kerána Bár, no private rights of property whatever were recognised in 1861. The inhabitants of the tract transferred were charged with Trinni and allowed to graze throughout the Bár that was included within the Jhang district. Of the demarcation of village boundaries in the cultivated portions of the district the strips of country from 7 to 8 miles broad, lying along the banks of the Jhelam and Chenáb, Mr. Ouseley notes, "As no Revenue Survey had ever taken place, and this was the first attempt to define boundaries, and as the people were very litigious, there were very numerous disputes, the great majority of which were settled by Judicial officers in person."

159. The data upon which the assessment was based consisted of :
1, classification of soils ; 2, produce estimates ; 3, experiments as to the

The assessments of crop-yield ; 4, rent rates ; 5, classification of villages ; Kálowál. 6, the incidence of existing assessments in selected villages. Soils were classed as cháhi, sailábá, and baráni. Well irrigated lands were further divided into cháhi-khális, land irrigated *only* by wells, and cháhi-sailáb, land irrigated by wells but also subject to inundations from the river. The produce estimates were rejected as being calculated to deceive, as "involving more trouble in preparation than they are worth," "apt to effect more harm than good" and "more cooked than any other papers that are turned out during the course of the Settlement." The necessity of ascertaining as nearly as possible the probable outturn of an acre of good, bad, and middling land was fully recognised, and to this end kankút and batái papers of villages with which the Settlement Officer was well acquainted, were examined and experiments in the field also made. An estimate was then made of "what was the minimum outturn of a bad bigha of cháhi land in the best assessment division." The usual cesses were then deducted and one quarter of the remainder assumed to be the Government share. This share was converted into a money value and a produce rate per acre obtained. Thence the revenue rates for the circles were deduced. An examination of kind rent rates gave but little assistance. The classification of villages with regard to their facilities of irrigation was in Kálowál confined to two divisions, into Hethár and Nukka. The revenue rates are subjoined :—

TAHSIL.	ASSESSMENT CIRCLE.	RATE PER ACRE.													
		Cháhi Sailáb.			Cháhi Khális.			Sailáb.			Baráni.				
Kálowál.	{	Hethár {	1st class			Rs. A. P.			Rs. A. P.			Rs. A. P.			
			2	4	0	1	12	0	1	8	0	...			
			2nd class			2 0 0			1 8 0			1 4 0			...
			Nukka			...			1 12 0			...			0 8 0

The final process must be described in Mr. Ouseley's own words : "But these revenue rates having been ascertained, the results which they gave for each village were not blindly accepted. The rates were considered merely as a reasonable method of arriving at an approximately fair Government demand. That demand was not fixed, until it had been tested by the light of the produce and rent rates, by the number of ploughs and wells in each village, by the quantity of land which though entered as cultivated because it was ploughed up, was nevertheless to lie fallow for a year, by the number of cultivators in each village, and generally by the circumstances and status of the inhabitants of each village, facts with which, owing to my long residence in the district and continued employment in the revenue work connected with it, I was well acquainted." In actual assessment Mr. Ouseley went far below his rates. The 113 villages were assessed with a jama of Rs. 33,476, falling on cultivation at the rate of Rs. 1-2-10 per acre.

160 It has already been explained in para 148 why the Ilákas of Garh Máhárájá and Ahmadpúr were not settled by Mr. Cocks. They were first summarily settled by Mr. Wedderburn in 1850. His assessment was in Garh Máhárájá 21 per cent, and in Ahmadpúr 16·7 per cent lower than the collections of past years, and amounted to Rs. 30,452. In spite of the reductions given on previous collections in kind, the assessment was extremely severe. In Ahmadpúr the previous collections were very heavy. The talúqá was originally held in jāghir by Imám Sháh who "had the character of being very exacting with the ryots, and laid on a variety of cesses in addition to the batái which was itself heavy." When the jāghir was resumed it was included in Sāwan Mal's farm, and he "was not the man to make reductions, so all the cesses and heavy rates were retained." Mr. Wedderburn's Settlement continued in force until 1857, when Captain Graham was deputed to revise it. Some revisions of the demand had taken place between 1850 and 1857, and the jama in the latter year of these two talukas amounted to Rs. 30,268.

161. The result of the revision by Captain Graham, known as the second Summary Settlement, was an enhancement of the jama to Rs. 32,460. The whole of the increase except Rs. 53 was taken in Garh Máhárájá. A Settlement enhancing the demand of a previous heavy settlement could have but one end. It broke down in a year and a half. Sufficient reductions had not been given to impoverished villages, and the enhancements in the Garh Máhárájá talúká were not justified. To reduce as little and to enhance as much as possible, is a policy that can only answer where the old demand is moderate.

162. The Summary Settlement of Captain Graham was again revised by Captains Tighe and Maxwell. The new assessments gave a decrease of Rs. 3,485=10·7 per cent on the jama of the 2nd Summary Settlement. This third Summary Settlement worked extremely well, and when the 4th Summary Settlement was made in 1862, the measurements of that year showed a large increase in the cultivated area and in the number of wells at work.

163. In 1861 these two talúkas were transferred from the Muzaffargarh to the Jhang district, under instructions conveyed in the Financial Commissioner's No. 1832 of 29th April 1861. At the close of 1862 the preparation of a Record of Rights for the villages of these two talúkás on the model of those prepared six years before for the remainder of the Jhang district by Mr. Monckton, was commenced. The old assessment was also once more revised. For this purpose assessment statistics were collected and statements prepared similar to those framed by Mr. Monckton. The assessment is generally known as that of Major Dwyer, but the Assessment Report was sent in by Major Lane in 1865, some three years after the commencement of operations.

The new assessment which remained in force until the assessments lately announced, gave a further reduction of Rs. 473. Its incidence on the cultivated area fell at a little less than Re. 1 per acre. The jama was on the whole moderate, but in several villages the assessments were heavy.

164. The following tabular statement gives the more important statistics of the five revisions of assessment that these two talúkas have undergone since annexation :—

YEAR.	BY WHOM MADE.	WELLS.	CULTIVATION.	JAMA.
1850	Mr. Wedderburn's	723	14,934	30,452
1850-7	Ditto Revised	No	details.	30,268
1857	Captain Graham's	719	20,296	32,460
1859	Captain Maxwell's	740	20,296	28,975
1862	Major Dwyer's	915	28,548	28,502

The statistics given for the 1st Summary Settlement have been taken from the vernacular records, the outcome, I presume, of some very rough girdáwari. At the second Summary Settlement the villages areas were measured and the cultivated area was elaborately subdivided into eight classes. When, however, the cultivated area, according to the Patwari's returns 20,296 acres, was compared with the area given by the Revenue Survey 32,206 acres, a startling difference was discovered. The Settlement Officer in charge cut this Gordian knot by simply splitting the difference and assuming the area so given as the area under cultivation, and on this he based his assessment. The statement shows the Patwari's survey area. The 3rd Summary Settlement was merely a revision of assessment. No measurements were made.

165. For convenience of comparison and treatment the 4th Summary Settlement statistics will be treated as a portion of the 1st Regular Settlement. Unless this is done it will not be possible to discuss the assessment of the district as a whole. Of the district then as it at present exists the assessments made by each Officer are tabulated below :—

	MR. MONCKTON.	MR. OUSELEY.	MAJOR DWYER.	TOTAL.
Villages ...	644	113	39	796
Assessment ...	2,05,389	33,476	28,502	2,67,367

Of the three assessments that of Mr. Ouseley was undoubtedly the most heavy, and that of Major Dwyer the lightest. Mr. Monckton's was, with a few exceptions, an exceedingly fair assessment, both in the interests of Government and the people. The demand on some of the Jhelam-side villages was heavy, and a few of the villages in the Centre Chenab Assessment circle, on the left bank of the river in the present Jhang tahsil, were over assessed; but otherwise an assessment initially moderate has been rendered light by the extension of cultivation, and the jamas have been hitherto paid with ease. Between Mr. Ouseley's and Mr. Monckton's assessments in the riverain villages there was but little difference. The rates at which their assessments fell in the villages on the right and left banks of the river in Chiniot are given below :—

	MR. MONCKTON.			MR. OUSELEY.		
	Rs.	A.	P.	Rs.	A.	P.
On cultivation	1	3	2	1	2	5
On cultivation and fallow	0	15	11	1	0	4

But the assessments on the upland wells differed widely. It is true that the wells in the tract lying along the Kerāna Bār are much superior to those in the corresponding portion of the country now included in the Jhang tahsil, but this alone will not account for the variation in the assessments.

In the country lying along the right bank of the Chenáb from the present Sháhpúr boundary to the Jhelum valley, the wells and soil of the portion nearest the Jhelum are infinitely inferior to those further east. The boundary line between the villages assessed by Mr. Monckton and by Mr. Ouseley divides the tract in two nearly equal portions. The villages along the line on Mr. Ouseley's side were probably assessed higher than they otherwise would have been on account of the superior quality of those lying beyond to the east, while the Jhang villages got off much lighter than was necessary because of the inferior quality of those further west. The jamas actually assessed on the five Jhang villages along the border fell on cultivation at the rates of Rs. 0-9-11, 0-12-0, 0-11-5, 0-8-8, 0-11-11, while in the six adjoining villages assessed in Sháhpúr the incidences were Rs. 1-6-8, 1-10-4, 1-2-7, 0-14-2, 0-14-11. The average rates per well were in Shahpur Rs. 70, 31, 50, 61, 47, 28, and in Jhang Rs. 37, 20, 28, 24, 32. In the corresponding tract east of the Chenab Mr. Monckton's rates on well irrigated lands were Rs. 1-2-0 and 14 annas, and the well jamas averaged Rs. 30 to 24 a well. The wells in this tract are not equal to those in Kálowál, but their assessments are very much lower than those of Mr. Ouseley. Further south the wells of the Shorkot and Jhang tahsils generally are too inferior to be compared with those of Chiniot, and the average well rate in the Centre and Bār circles dwindled down as low as Rs. 17 and 18, viz :—

JHANG.

Utár Vichand.	Centre Jhelam.	Centre Chenáb.	Bar Chenáb.	Kachí.
Rs. 18	Rs. 22	Rs. 26	Rs. 18	Rs. 19

SHORKOT.		
Bár Chenáb.	Kachí.	Centre Chenáb.
Rs. 17	Rs. 18	Rs. 18

The incidence of the assessment on the cultivated area was, however, by no means low.

166. The First Regular Settlement of the district has been eminently satisfactory, and the results are everything that could be wished. With the exception of some temporary remissions and revisions of assessment in a few villages in the Shorkot Kachí, and some isolated instances of over-assessed upland villages in that and the other tahsils, there has been no occasion for correction of the work of the three Settlement Officers. The enormous improvement that had taken place in agricultural assets and resources by the time the Revised Settlement commenced, is clearly set forth with due detail in Statement A. of the Appendices. In fact improvement seems to have set in almost immediately Mr. Mouckton finished his work, and the credit he took for the excellence of this work in the quotation given below was, I think, not without good reason. "It will be seen that the revenue has been realised with the most perfect punctuality, that in no instance has there been a necessity for resort to the mildest coercive process; and that even notices to pay (Dastaks) had decreased to such a merely nominal figure as not to cover the regular pay of the establishment entertained for their issue. The agriculturists of the Jhang district were then contentedly fulfilling their engagements with the State, and steadily pursuing their ordinary avocations, while the adjoining district of Googaira was in a full blaze of insurrection, and the nomad tribes of the intervening Bár jungle were sacking the frontier thánahs. The pastoral tribes on the other side in the Sháhpúr district were showing at the same time a warlike spirit; and had not the memory of days of license under the Sikh rule been succeeded by better feelings among the Mahomedan population of this district, a serious revolt in the southern provinces of the Punjab must have been added to the many lesser complications arising from the mighty struggle then in progress throughout upper Hindustán." This was written in the commencement of 1859. In 1860 the Deputy Commissioner wrote in less eloquent language: "The Settlement is working remarkably well, the revenue realised without difficulty, 914 additional wells sunk; cultivation increasing—the people comfortable. Only one village has broken down, and to that relief has been given." Since 1860 until now the Settlement has been working with the same happy result.

167. The statement below gives the statistics that were collected for the assessment reports regarding the extent to which Transfers of land, their origin and the lesson they teach, transfers of land have taken place:—

SALES.

District. Shorkot, Jhang, Chiniot. Tahsil.	DETAILS.		TRANS-FERS.	AREA.			PRICE.	JAMA.	INCIDENCE.		
	Period.			Culti-vated.	Unculti-vated.	Total.			Per acre.	Per Rupee of Jama.	
	Before 1856	...	...	...	...	...	...	Rs. A. P.	Rs. A. P.		
	Since	„	...	128	1,632	1,861	3,493	39,518	992	11-5-0	39-13-5
	Before	„	...	829	13,786	17,527	31,313	1,04,346	11,861	3-5-4	8-12-9
	Since	„	...	1,168	10,374	12,803	23,177	3,00,238	7,933	12-15-3	37-13-7
	Before	„	...	...	...	...	...	...	...	...	...
	Since	„	...	630	5,229	8,418	13,647	1,49,171	4,115	10-14-11	36-4-0
	Before	„	...	829	13,786	17,527	31,313	1,04,346	11,861	3-5-4	8-12-9
	Since	„	...	1,926	17,235	23,082	40,817	4,88,927	13,040	12-2-0	37-7-10

MORTGAGES.

District. Sherkot, Jhang, Chiniot. Tahsil.	DETAILS.		TRANS-FERS.	AREA.			PRICE.	JAMA.	INCIDENCE.	
	Period.	Culti-vated.		Unculti-vated.	Total.	Per acre.			Per Rupee of Jama.	
Before 1856 ...	257	2,347	2,705	5,052	44,753	1,896	Rs. A. P. 8-13-9	Rs. A. P. 21-6-7		
Since „ ...	388	4,350	4,494	8,844	71,751	3,351	8-1-10	22-3-3		
Before „ ...	2,482	27,529	24,913	52,442	2,63,770	23,848	5-0-6	11-2-0		
Since „ ...	2,585	16,882	16,443	33,325	4,57,259	12,616	13-11-6	36-3-11		
Before „ ...	630	4,045	5,981	10,026	92,804	4,028	9-4-1	23-0-8		
Since „ ...	958	7,452	8,023	15,475	2,08,726	6,532	13-7-10	31-15-3		
Before „ ...	3,369	33,921	33,599	67,520	4,01,328	29,771	5-15-1	13-7-8		
Since „ ...	3,931	28,684	28,960	57,644	7,37,737	22,499	12-12-9	32-12-7		

According to the figures of the Sale statement the price land had been fetching on the average during the last twenty years is about 38 years purchase of the rent taken by Government. The two statements convey two

pieces of information : 1st, the extent to which land has changed hands, and is encumbered ; 2nd, what a purchaser or mortgagee has given for the privilege of taking the proprietary share of the produce and paying one rupee of the Government demand. From these facts conclusions can be drawn as to the pressure of the Government demand. It is easy to grasp the fact that so many acres of land assessed at so much revenue have been transferred, and to infer that the owners of the land must have been compelled through want of cash to consent to the transfer. Whether the pecuniary difficulties that gave rise to the transfer were the result of the land assessment or not is quite a different matter. If it were a generally true proposition that the indebtedness of the agricultural classes is due to the pressure of the land revenue, one would expect to find the most transfers and the heaviest encumbrances in villages where the demand is highest, and the smallest number in good villages assessed lightly. But, as a matter of fact, when one descends into details experience teaches that good villages lightly assessed are most burdened with debt. We have not to go far for the reason : zemindars are thievish, generally quarrelsome, and always litigious. The jama is light and the land is good. The bankers are only too willing to lend money on such excellent security. Their morals are not shocked whether the creditor spends it in paying fines imposed by a magistrate or defraying the costs of a civil suit or squanders it in debauchery. They know the land is fertile and that the Revenue dues chargeable to the proprietary share are light. It may be objected that it is unfair to generalise from a few instances furnished by individual villages. Let us therefore take the different circles as units. Here again it will be at once discovered that the richest circles furnish the most mortgages. Yet it may be said, but the best lands are the most heavily assessed. Undoubtedly, but the surplus produce after payment of the land revenue is always much larger than in the case of poor villages. The extra few annas an acre that are imposed on good villages as compared with poorer villages in the same circle, do not nearly represent the difference in the returns from the two classes of villages. It is so both in theory and in practice. The Government assessment being equal as I estimate to $\frac{1}{3}$ th share of the produce, then where the assessment is high the amount of the remaining $\frac{2}{3}$ will be greater than where it is low. I have already noted the tendency of modern assessments to let off good villages too lightly and tax bad ones too heavily. Why the demand for mortgages of the best lands should be most effective, is clear enough, but why should the proprietors of these lands be obliged to mortgage their property ? How is the necessity brought about ? What often does take place is this. When the owner of a good well or a fat piece of sailáb deals with a baniah who is anxious to hold some land in mortgage, he finds that his credit is unlimited. It is a case of spending made easy. He can have whatever he wants whenever he wishes. All that he is troubled with is his signature or assent to the usual six monthly statement of accounts, and at harvest time he will make a few payments to the baniah in grain. This goes on for 4 or 5 years or often longer. Then the demeanour of the creditor changes. He insists upon a registered bond for the amount due or a mortgage. The debtor temporises as long as he can, perhaps transfers his account to another shop, often takes his chance of a lawsuit trusting in his luck to evade some of the items.

All these devices fail, and he makes over a share in his property on a verbal Lekha Mukhi contract to his creditor. This is probably the very worst thing he could do. A Lekha Mukhidár is as hardly displaced as was the old man of the sea. The zemindar never goes into the account and is fleeced in every possible way. Instead of growing less the debt grows larger, and a mortgage is at last gained. I have already explained the status of a mortgagee. He steps into the proprietor's place, takes the proprietary share of the produce "haqq bhátári," and pays the revenue, some small fee in kind only is retained by the mortgagor to mark his rights. The fact, therefore, that the lands of any village or circle are heavily mortgaged is no reason for lowering the assessment. To reduce the Government demand is to put so much more money in the mortgagee's pockets. On the contrary, the existence of a large number of mortgages, the incidence of the mortgage money per cultivated acre and per rupee of jama being high, denotes a large surplus left to the mortgagees out of the proprietor's share of the produce after payment of the Government dues, and warrants a high assessment. It may be urged, where only a portion of a zemindar's land is mortgaged, that it will be the easier for him to redeem, the lighter the assessment is pitched. Mortgages are sometimes paid off it is true, but not many, and the amount of land mortgaged is increasing so steadily that it is impossible to act upon such an argument.

168. As far as this district is concerned there is, as far as my experience and the statement of sales goes, nothing to show that the original proprietors are being rapidly expropriated. Are the agriculturists becoming expropriated. I should say that sales to banialis pure and simple are few. The policy and class sympathies of Sáwan Mal resulted in the acquisition by Hindús of large properties in virtue of purchase, mortgage, direct grant and *húth rakhái*. Many of these men have now given up trading, but many also practise their original calling in addition to managing their landed property. These are the chief purchasers of land. That land is highly valued is shown by the statements, and how rapidly it is increasing in value is a matter of daily conversation, a still surer test.

169. The zemindars in Chiniot are most free from debt and those of Jhang the most embarrassed. Shorkot holds an intermediate position. In the Settlement Records 11½ lakhs of mortgage and 1½ lakhs of Lekha Mukhi are recorded. To charge the old assessment with being the author of all this indebtedness is, I cannot phrase it otherwise, sheer nonsense. Consider for a moment what the incidences per acre of cultivation and per well of the old assessments were, the increase that has been taken by the new assessments and their incidence. Remember the great rise that has taken place in the price of agricultural produce and the infinitely greater luxury and comfort enjoyed by all agriculturists except the lowest, as compared with their condition at annexation. Our system of Revenue collection is to some extent answerable for agricultural debt, but the real and true cause of all our woe was the mistaken and misplaced gift of full transferable proprietary right in land to the cultivator, and with it of a vast credit only limited by the value of that proprietary right. It is only of late that there has been

Indebtedness of the agricultural classes, its causes and aspects.

an awakening to the true facts of the case, but that the cause stated is the true one, I have not the slightest doubt. The thrifty and unembarrassed zemindars of this district can be counted up on one's fingers. So long as a zemindar has credit, so long will he borrow, and so long as he borrows shall we find our annual returns of land transfers slowly but surely and steadily increasing. The sole basis of his credit is his transferable property in the land. Take this away and all the security that the money lender has is the annual outturn of the crops. In such case we should not hear of zemindars being thousands of rupees in debt. Their credit would shrink and their debts too. There are numbers of villages alongside the Bar east of Kot Isa Shah in which there is hardly a single mortgage. Why? Because cultivation is uncertain and the mortgagee might find the mortgaged well abandoned in a few months and himself left saddled with the revenue. It is not good enough. Here the zemindars have no credit, and they are not in debt except to a small amount. You do not find tenants-at-will over head-and-ears in debt. They are in debt it is true, but the limit is the amount that the baniah considers is pretty certain to be repaid to him at the next harvest. That the conferment of proprietary right in the soil has really benefitted the zemindar I sincerely doubt. To have twice as many wives as before, to eat better food, to be better clothed and housed, to ride a nag where he went formerly on foot, are outward signs of improvement and civilisation, but when we remember that all this is accompanied by debt (there is hardly a Mahomedan landowner in the district who is not in debt), and that this debt is steadily increasing, how is it possible to be satisfied with things as they are? If a man draws a large prize in a lottery and follows it up by plunging into extravagances and adopting a style of living that is far beyond his income, we do not say that he is advancing in the path of civilisation and steadily improving his condition. He is called a reckless prodigal, and it is universally predicted that he will go to the dogs in the shortest of periods. Had rights of occupancy only been given to the cultivators, and all transfers, except such as the State sanctioned, absolutely prohibited, there certainly would not have been anything like the amount of indebtedness that we now find, and I have little doubt that the Government would have been able to have largely increased the land revenue. After 30 years we are just beginning to take about as much as the Sikhs took on a very much smaller cultivated area. Why we cannot take more is exemplified in the mortgage statement. There are mortgages in the district to the amount of 11½ lakhs and of course an enormous quantity of unsecured debt besides. The interest on the unsecured debt all goes out of the agriculturist's pocket, out of the produce of his land. I suppose there are but few villages in which the annual interest on debt does not exceed the Government demand. So far the agricultural community is impoverished and less able to pay a fair rent to Government. As our Government has made it possible for the zemindar to raise money so has the money-lender made it difficult for him to free himself, when once in debt, by charging an extortionate rate of interest. Here as elsewhere 24 per cent. per annum is the rate charged. With this rate and compound interest a debt doubles in three years. No wonder the wretched foolish Jat never manages to extricate himself. He is sucked dry and then allowed to drop out of the meshes.

Village Tenures.

170. The statement below shows the tenures on which the estates in this district are held :—

	CHINIOT.	JHANG.	SHORKOT.	DISTRICT.
Zemindári	1	8	2	11
Communal Zemindári	16	24	8	48
Pattidári	1	...	...	1
Bhyachára	111	189	112	412
Imperfect Bhyachára and Pattidári ...	123	125	54	302
Government Property	18	12	15	40
TOTAL ...	265	358	191	814

The prevailing tenure of the district is a kind of imperfect Bhyachára, known as 'Bhyachára cháhwar.' In the occupied lands, wells and sailáb, possession is the measure of right. The unattached waste is generally village common held it may be on Khewat shares where the joint right of each Khewatdar is measured by the share of the village assessment paid by him ; or individual right is represented by the fraction of the total area of the village held ; or on ancestral shares by the descendants of the original founder or founders of the village to the exclusion of the other proprietors.

CHAPTER VII.

FISCAL PRESENT.

171. As the assessments of each Tahsil have already been separately reported upon at considerable length, this chapter will be as brief as I can make it. The district will be treated as a whole and not tahsíl by tahsíl. The methods, calculations, and stages by which the assessments were arrived at will be given as concisely as possible.

172. The first step was the division of the villages under assessment into assessment circles. In Jhang this was an exceptionally easy process. The tract under assessment is composed of the Jhelam and the Upper and Lower Chenáb valleys, hemmed in on either side by the high-lying plateaux of the Sándal and Kerána Bárs and the Thal, and a few villages on the banks of the Rávi. The primary classification that at once suggested itself was of villages on the river bank and villages in the uplands. When, however, the agricultural assets and circumstances of the upland villages were considered, it became evident that those situate under the Bár, farthest away from the river, were in point of

facilities for cultivation less advantageously placed than the villages between them and the riverain villages. It was found convenient to arrange the villages on the left bank of the Chenab from the Gújránwálá border to the Rávi, and also those on the left bank of the Jhelam into the three divisions of River, Centre, and Utár or Bár. On the right bank of the Chenab the upland villages were found to be so diverse in quality, those nearest the river being often better than those adjoining the river villages, that it was deemed neither necessary nor convenient to have two divisions of the upland villages. A set of villages, fourteen in number, lying west of the Chenab on either bank of the Halkiwálá nullah, an inlet from the river, formed an exception. This tract is a natural basin between the higher lands of the River circle villages to the south and the Utár lands on the north. The soil is flooded partly by the natural but chiefly by the artificial overflow of this nullah, whose waters are raised by means of embankments thrown across the channel, and is a good, and its agricultural produce so much more valuable than on the upland wells, that the villages could not well be included in the Utár circle, while they were too far from the river to be classed with the River villages. In the country lying west of the Jhelam and Chenab, in the Sind Ságar Doab, the separation of the Kachi villages into two divisions was unnecessary for much the same reasons as obtained in the case of the villages on the right bank of the upper Chenab. The present arrangement of the villages into assessment circles is based upon and differs but little from the classifications of Mr. Monckton and Mr. Ouseley. Mr. Monckton preserved his three divisions of River, Centre and Bar throughout the villages he assessed. Mr. Ouseley only had two circles, Hethar or River, and Utár or Bár. Among the maps will be found one showing the circles now adopted. The present disposition differs from the old in the following points only. On the right bank of the upper Chenab the additional circle of the Halkiwálá has been created out of the villages assessed by Mr. Ouseley, and the upland villages assessed by Mr. Monckton have been grouped into one circle, the Utár Vichand, instead of two. In the Sind Ságar Doab the non-riverain villages likewise form only one circle, the Kachi. The names of the circles are given below :—

TRACT.	No.	ASSESSMENT CIRCLES.
Between the Chenáb and Sándal Bár ...	1 2 3	River or Hethár. Centre or Wasat. Upland or Bár.
Between the Chenáb and Kerána Bár ...	1 2 3	River or Hethár. Halkiwálá. Upland or Utár.
Between the Jhelam and Kerána Bár ...	1 2 3	River or Hethár. Centre or Wasat. Upland or Utár.
Between the Jhelam and Jhelam Chenáb and Thal	1 2	River or Hethár. Upland or Kachí.

173. The villages having been thus arranged into circles, the second Classification of soils and step was to fix revenue rates for each description Revenue rates adopted. of soil in each circle. The three main soil divisions are *cháhi* irrigated by wells, *sailáb* naturally irrigated by river floods, *barání* dependent on rain alone. There are several sub-divisions of well irrigated land which I give below with their vernacular names :—

Vernacular name.				English equivalent.	
Cháhi Khális	...	...	} Irrigated by	Well alone.	
Cháhi Sailáb	...	...		Well and river flood.	
Cháhi Nahrí	...	...		Well and canal by flow.	
Cháhi Jhallárl	...	...		Well assisted by a Jhallár permanent or temporary.	
Jhallárl	...	...		Jhallár alone.	

The inundation canals of this district are only found in one tahsil and are of rough construction. Lands irrigated by canal flow have always been assessed at the same rates as *sailáb* lands. The soil rates will be best treated by taking each description separately, especially as a well rate was generally used in assessing well lands of the two southern tahsils in all but the river circles.

174. Barání or rain lands. One assessment rate only has been used throughout the district, 8 annas an acre. It is the rate Rain lands' assessment. that was used by Mr. Ouseley and Mr. Monckton, and also by Mr. Morris in his assessment of the Hafizábád Utár lands. In the Government waste the rate charged is higher and varies with the crop, but is paid easily enough as the leases are annual, and are only taken out when, owing to a favourable rainfall, seed can be sown with tolerable certainty of germination. For future showers to mature the crop the lessee has to trust to his luck. If there is no rain few or no leases are taken out. In assessing a fixed jama on barání lands in this district the rate had to be pitched low to allow for the uncertainty of such cultivation. To go lower than 8 annas was inadvisable. The only important rain cultivation is in the northernmost corner of Chinot, in the Nissowáná villages adjoining Sháh-púr. Here I found that Mr. Ouseley had assessed the rain-lands very much over 8 annas an acre, and that my revenue rates' jamas were even less than the old jamas that the people had been contentedly paying for 20 years, although the area of rain cultivation had greatly increased. I also ascertained that the villages were expecting a considerable rise in their jamas, and I knew that they were all well off, that they were but little in debt, that there were no mortgages, and that they were rich in flocks and herds. I accordingly assessed considerably above my rates, though with great caution, as I was not at all confident in my estimate of the quality of these lands. The assessments of the two villages containing the largest barání area were respectively 56 and 16 per cent. above the rates jamas, but the zemindars were well pleased in both instances. In other portions of the Chinot Tahsil the rate itself was taken ; but in Jhang and Shorkot I practically put no assessment on barání cultivation. It was thrown in with the well assessment.

Where the assessment was fluctuating on wells it was necessarily assessed. I suggested to the zemindars, and my suggestion was adopted wherever there was any good baráni land, that the baráni lands should be measured up when cultivated and charged at 8 annas an acre, the increase being either credited to the village malba fund or divided rateably among the Khewatdars. Where the area was small the villagers said it was not worth taking so much trouble about so little, and that the proprietors of the land might hold what rain-lands they possessed free of charge. At the same time if I knew of any village where in years of good rain patches of land around the wells were cultivated as rain-land, I did not lose sight of the fact in fixing the assessment on the wells. The total baráni area in the district under cultivation shown in the returns is 3,480 acres.

175. River-flooded lands—Sailáb. The assessment rates used in The Assessment of Sailab given below in tabular form for the River and Tahsils.

Rates sanctioned for Sailab Lands on the

CHENAB.			JHELUM.	RAVI.
Tahsil Chiniot.	Tahsil Jhang.	Tahsil Shorkot.	All Tahsils.	Tahsil Shorkot.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
0 12 0	0 15 0	1 0 0	1 0 0	1 0 0

For an unimportant sailáb and nahri area included in villages not in the River circles lower rates were sanctioned in Jhang and Shorkot. One rate was used throughout in Chiniot. The rates are below :—

JHANG.			SHORKOT.	
Centre Chenáb.	Utár Vichand.	Kachi.	Bár.	Centre Chenáb.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
0 12 0	0 8 0	0 12 0	0 12 0	0 13 0

The reason for reducing the rates in these circles was that the sailáb lands, being more distant from the stream, were less certain of being annually flooded than land of the same description in the riverain villages. In other words these lands give less produce because they bear fewer matured crops. It will not be necessary to further discuss these exceptional rates. They are corollaries of the rates adopted for the River circles.

176. Before attacking the rates themselves, the preliminary point, one of some magnitude, whether the sailáb lands should be assessed on a fluctuating system similar to the system in force in the districts of Bannú, Dera Ismail Khán, Múltán and Muzaffargarh, or not, had to be decided. It is a matter of some regret to me personally that I had to express my opinion on the question before I had been a year in the district and before I had gained any experience from actual observation of the flood action of the rivers. The opinion I gave was in favour of a fixed assessment for the sailáb lands of the Chenáb and Jhelam, on the grounds that the people were obstinately opposed to the introduction of a fluctuating assessment, and that with the exception of a few villages there was reason to believe that there were no violent variations in the area annually cultivated, and that the tract generally was fairly certain to be year by year sufficiently moistened either by flood or percolation from the river. The Rávi villages were different. There the most violent changes do take place and a fluctuating assessment was recommended.

These proposals were approved and sanctioned by the higher authorities.

In the case of the Jhelam villages a fixed assessment is undoubtedly the right system. They are exposed to more danger from over than under-flooding. With reference to the Chenáb I am not so

On the Chenab, Chiniot. certain that my recommendations were the best possible. I mean that there are certain villages whose futures seem less roseate and promising than they did two or three years ago. The arguments that I used in the Chiniot Tahsil Assessment report to justify my views were these. The circumstances of the Tahsil are quite different from those of the districts on the Indus and Rávi. There whole villages are entirely dependent upon river floods for their annual crops. At one time a tract of rich and fertile country is transformed into a barren waste by the failure of inundation or by devastating floods, leaving behind a soil ruined by deposits of sand. At another a tract that has for years lain bare and sterile is covered by a rich lodgment of silt, and is at once brought into cultivation. In Chiniot the river is confined within well-marked limits. It commits no vagaries like the Rávi. The villages that depend chiefly upon their sailáb lands are few, and their lands are most advantageously situated and rarely miss receiving the moisture they require. Most river villages possess wells, and as a rule the owners of the wells are also the owners of the sailáb. Their eggs are not all in one basket. A failure of the sailáb crops would no doubt press heavily on the proprietors, but calamities of season always have and always will happen ; and in such case where the sailáb proprietors own wells besides the sailáb, the calamity will be much more successfully combated. The rainfall in Chiniot is also nearly double the rainfall in Dera Ismail Khán and the two southern districts of the Múltán division, and though the effect of rain on sailáb land may be not so beneficial as percolation or a flood it still does help ; and a good rainfall might often give just the required assistance to lands that had not been thoroughly moistened by percolation and enable fields to be cultivated that would otherwise have remained fallow. This is a theory that zemindars are not ready to admit, but that it does hold good at times I have no doubt. The very great benefits afforded by

the elasticity of a fluctuating revenue system and the extent to which the system of assessment is thereby simplified are too well known to need demonstration. Nevertheless on the above grounds and also considering the exceedingly light rate at which it was proposed to assess the sailáb lands, I held that the assessment should be fixed not fluctuating. When writing the Shorkot report some months later, in the middle of 1878, I adhered to the opinion that I had expressed in regard to the Chiniot sailáb lands. The zemindars here were even more violently opposed to a fluctuating assessment than in Chiniot. Meanwhile a new girdáwari of the river villages had been made to ascertain what area had been uncultivated owing to the unprecedentedly dry season of 1877. The results showed that exclusive of loss by diluvion 4,670 acres or 11 per cent had been thrown out of cultivation, while 2,702 acres of new land had been brought under the plough. Upon these figures I thought that there was no real necessity for the introduction of fluctuating assessment. Inequalities will arise in the assets of different villages from variation in the height and direction of floods, and a fluctuating system is a safeguard against these evils, but I thought we should hesitate before forcing upon the zemindars a revenue system to which they were then so bitterly adverse. After going carefully through the girdáwari papers I found only 3 or 4 villages where a fixed assessment would be at all risky. In the Jhang tahsil the girdáwari indicated that 3,958 acres out of 15,877 acres, 25 per cent of the sailáb cultivation, had fallen out of cultivation during the year. I still, however, did not recommend a fluctuating assessment because it appeared that a failure of floods in the Chenab, such as occurred in 1877, was as unprecedented as the exceedingly high and continuous floods of 1878. The fact that a quarter of the sailáb cultivation had fallen out of cultivation was a matter for grave consideration where a fixed assessment had been proposed, and a recurrence of such seasons as the rainless floodless season of 1877 could hardly fail to break down a fixed assessment, but this was not to be anticipated.

On the Chenab, Shorkot. On the Chenab, Jhang.

177. For the Jhelam and the lower Chenab sailáb I have no anxiety. The outlook under a fixed assessment of sailáb lands. I think the fixed assessments will work well with a little management on the part of the District authorities. The assessment on the Upper Chenab in Chiniot is so exceedingly light that the occurrence of a bad harvest or a failure of flood ought not to have any serious effects. In Jhang the outlook is not so reassuring. I think a good deal might be done to ensure a flooding to villages in the river circles by opening out old channels and assisting the people to throw up embankments to flood their lands. Suspensions of demand should also be liberally allowed. Two bad years rarely come together, and in a good year the sailáb lands might pay half as much again as the assessment without difficulty. There are a few* (5) villages who have applied for a fluctuating assessment, and in the future I would give all other villages upon whom a fixed assessment pressed heavily the same system.† The systems of fluctuating assessment are simple enough,

* Mianwál and Ohangránwála in Chiniot, Dádúwáná, Zinda Sháh and Syálanwála in Jhang.

† NOTE.—Since this was written fluctuating assessments have been sanctioned for Bindí Mahni in Jhang and Bad Rajbána in Shorkot.

and the only difficulty is to ensure that the Patwáris' returns are accurate. Where only a few villages have to be measured up every year there can be no reason why the Patwáris' papers should not be closely overhauled, and if this is done by competent superior officers, the papers will be correctly prepared.

178. In determining the sailáb rates my chief guides were the rates paid in the adjoining districts, the rates of the Regular Settlement, and the jamas paid by villages whose assets had not increased since last Settlement. The produce estimates did not assist in the least, as the rates they gave were manifestly such as could not possibly be imposed. Another consideration was the increase given by the rates. It will be necessary to discuss the rates fixed for the sailáb lands of each river separately. In Chiniot the enhancements in river villages were so heavy that the Financial Commissioner directed that great caution was to be exercised in assessing villages containing large sailáb areas although the sailáb rate was only 12 annas. In the other tahsils this circumstance received less attention. The rates adopted in other districts, where the quality of the sailáb is much the same as in this district, are given below :—

ON THE INDUS.						ON THE CHENAB.			
Tahsil.	Dera Is-mail Khán.	Bhaktar.	Leia.	Mianwál.	Isa Khel.	Serái Sidhú.	Rangpúr.	Hafizábád.	Phálán.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Rate ...	0 14 0	0 12 0 0 14 0	0 12 0 0 13 0	1 10 0 1 2 0 1 8 0	1 8 0 0 14 0 0 8 0	1 0 0	1 1 0	1 4 0	1 6 0

The Indus sailáb lands and those of Serái Sidhú and Rangpúr are assessed on a fluctuating system. I was personally acquainted with the character and value of the Indus sailáb lands. The Chenáb sailáb tract of Serái Sidhú and Rangpúr immediately adjoins this district, and could not to any appreciable extent be either better or worse. A residence of three years in the Gujrát district had given me some insight into the quality of the Chenáb sailáb lands in that district, especially as I had attested the alluvion and diluvion papers every year. With this knowledge and these facts in hand it was not difficult to arrive at what seemed fair rates for the Chenáb sailáb lands of this district, assuming that the assessment rates adopted in other districts were correct. The real basis of my rates is comparison. The different rates in the three táhsils were varied for the same reason. Had the increase in the assessment of the Chiniot river villages been moderate, I should have proposed 14 annas as the rate; but this was found to give too

high an enhancement, and 12 annas was the rate substituted. In the Jhang Chenáb, Jhang. tahsil I proposed 14 annas. The Settlement Commissioner considered that Re. 1 could be taken and the Financial Commissioner sanctioned 15 annas. I quote from his orders:—"He is unwilling to obliterate the distinction which the Settlement Officer has drawn in his rates between the sailáb land of the Chenáb proper and the sailáb lands of the Jhelam and the united Jhelam and Chenáb; for he thinks that the Settlement Officer is certainly right in holding that there is a very marked difference in their quality. He is also anxious to keep the sailáb rates low; he thinks they must be low for a fixed assessment in a country of small rainfall. For the above reasons the Financial Commissioner decides to put the sailáb rate at 15 annas instead of Re. 1. But for the fact that there is a very large culturable area in which some considerable extension of cultivation is certain, he would have preferred to leave the rate at 14 annas." This was the only circle in which my sailáb rate originally proposed was altered. A rate of Re. 1 was passed for the Shorkot villages on the lower Chenáb.

179. The sailáb lands of the lower Chenáb are decidedly superior in quality to those of the upper Chenáb above its junction with the Jhelam. There is not much if any difference between the sailáb lands of the best villages above and below, but there is a far larger proportion of good sailáb land in the river villages of Shorkot than in those of Jhang and Chiniot. The lower Chenáb lands are superior because the soil is more argillaceous than that of upper Chenáb. In Chiniot and Jhang the soil may be classed as a light loam, sometimes becoming sandy, and in Shorkot as good loam. Sailáb lands should not be too stiff. Percolation hardly takes place in clayey land. Such soil is also very difficult to work properly after being flooded, and always breaks up into clods. In Shorkot the proper consistency is found. The soil is neither too light nor too strong. In Jhang and Chiniot soil made up of little else but sand is often found. The lighter the soil the greater the percolation is, I fancy, true, and this is why, as the zemindars with some exaggeration say, wheat can be grown in sand on the Chenáb; but very light soil rapidly loses its moisture unless the main stream is near. The more loamy character of the soil in Shorkot is due entirely to the admixture of Jhelam water. The deposits of this river are very much less sandy than the Chenáb, and its water contains a larger quantity of silt in suspension. The yield on sandy soils is always lighter than on loams. The conclusion to be drawn from this comparison is, that if Re. 1 per acre is the proper rate for Shorkot sailáb lands the rate in Jhang and Chiniot ought to be pitched lower. Twelve annas an acre was the rate passed for Chiniot, but this rate was put lower than it otherwise would have been because of the large increase given in the assessment. Therefore a rate of about 14 annas was proposed as the proper one for Jhang. It may be objected that this method of assessment has no true basis, and if produce estimates form the only true basis, the Government share being taken either as $\frac{1}{6}$ or as half net assets, the objection is well founded. But I am quite prepared to assert that to have assessed either

sailáb or any other lands on the produce estimates would, if the jamas had been taken up by the lambardars, have ruined the district in a few years. I doubt, however, whether any tenders of engagement would have been made. The question of the accuracy of the produce estimates will be treated separately.

180. The Jhelam sailáb lands differ much from those on the Chenáb.

The Jhelam sailáb lands. On the upper Chenáb a stiff loam soil is seldom seen, on the Jhelam a sandy loam is the exception. The Jhelam lands are more clayey in character than the lower Chenáb. They are, on the whole, I consider, the best in the district. They yield better than the sailáb lands of the Chenáb. But the great merit of Jhelam sailáb lands in the eyes of the zemindar is that the Jhelam, if it cuts away land, always when it retires throws up good soil, not sand banks like the Chenáb. Jhelam alluvion becomes fit for the cultivation of 1st class crops in two or three years. On the upper Chenáb a good soil is seldom formed under 6 or 7 years. First comes the low sand bank, then a thin layer of silt is spread over the top; *jhái* or *lát* jungle springs up and acts as a kind of sieve for catching and depositing the sediment held in suspension by the next year's floods as they pass over. Year by year this slow process of soil formation goes on until a soil sufficiently deep for purposes of cultivation has been formed. With the Jhelam the case is very different; instead of a sand bank a mud bank is thrown up, and this often bears a crop of *samúka* or coarse rice the first year. Year by year the mud-bank gradually rises in a manner similar to but more rapid than the Chenáb sand-bank, until it becomes sufficiently high for the cultivation of kharíf crops. The Jhelam lands suffer less than those of the Chenáb from failure of flood. Out of 19,050 acres only 1,457 acres or 7·6 per cent. remained fallow in 1877-78, and in two villages only was the decrease in cultivation at all large. The rate proposed for the Jhelam sailáb and sanctioned was Re. 1.

181. Well irrigated lands. The assessment of these lands was a far

System adopted in assessing wells.

more difficult matter than the assessment of sailáb lands, and this was well exemplified by the disputes that arose in distribution of the village jamas over the single wells. In the Chiniot tahsil the wells in all circles were assessed by an average rate on cultivation checked slightly in the river and carefully in the upland circles by the average incidence of the assessment per well. The same method was observed in the assessments of the river circles of the other two tahsils. In the Centre-Jhelam circle of tahsil Jhang and the Centre-Chenáb circle of tahsil Shorkot the assessments were framed partly by a well and partly by an acreage rate. In the remaining circles of the Bár and Káchi in both tahsils, where a system of fluctuating assessment on wells has been introduced, and in the Utár Vichand and Centre-Chenáb circles of tahsil Jhang, the assessment unit has been not the acre but the well.

The well assessment in river villages; data on which based.

182. The rates used in the river circles are given below :—

TAHSIL.	ACREAGE RATES FOR WELL LANDS.		AVERAGE WELL RATE.	AVERAGE RATE OF JHALLA.
	Chāhi-sailāb &c.	Chāhi-Khālīs.		
	Rs. A. P.	Rs. A. P.	Rs.	Rs. A. P.
Chiniot	1 4 0	1 4 0	34	...
Jhang {	Chenāb ...	1 6 0	24	1 2 0
	Jhelam ...	1 6 0	27	...
Shorkot	1 6 0	1 4 0	24	1 4 0

In Chiniot the revenue rate sanctioned for the Halkiwāh circle was nominally Rs. 1-6-0, but practically the assessments were made with a very much lower rate as the actual assessment was 10 per cent. below the rates jama. These rates are much the same as those framed by Mr. Monckton and Mr. Ouseley, and the rates at which the Regular and the Revised Settlement assessments fall on the cultivated area and per well agree still more closely. The considerations upon which my rates on well irrigated lands are based do not differ from those on which I relied for guidance in framing the sailāb rates. The rates adopted at last Settlement, the incidence of the Regular Settlement assessments per well and per acre, the rates used in adjoining districts, the varying qualities of the wells in the different tahsils, the increase in assets, the enhancement of assessment given by retaining the old rates or by imposing the rates that seemed adapted to the wells, the rates per acre and per well paid in villages whose assets had remained stationary since last Settlement, with the present circumstances of the proprietors, the relative qualities of wells in different circles and villages, the average areas shown in the returns as actually irrigated by wells in circles and villages are among the multitude of reasons that a Settlement Officer has to consider and weigh before he fixes the demand for any village or circle of villages. Here again the produce estimates only proved that it was impossible to use them as guides to the assessment. The rate per acre for the well lands in Chiniot is light, but the well jamas are high, averaging over Rs. 30 a well. On the Jhelam the average rate and the well jamas are full. On the Chenāb in Jhang and Shorkot the well rates are comparatively low, but the average rates are not light.

183. Before going into the assessments of the upland wells the more

The differences between upland and lowland wells from an assessment point of view.

important points of difference between them and lowland wells as assessable units, will be pointed out. The river villages generally, but more especially in the two southern tahsils, contain two classes of wells, those whose lands are usually flooded from the river, and those on the bank over which the inundations never rise.

A well assisted by river flood has usually a large area attached, and the whole of this will be cultivated every year if the floods do not fail. This cul-

tivation may be said to be independent of rain, so far as maturing the crop goes, though of course the absence of rain will cause a great falling off in the yield. Some of those wells have larger areas than can be irrigated by the well, and in such case as much as possible is irrigated and the remainder takes its chance as ordinary *sailáb*. Ordinarily, however, the well area is not more than can be irrigated from the well, and so long as the land is flooded the entire area will be cultivated every year. If the well were not there the land would be cultivated as *sailáb*, and in assessment an average rate is used, pitched so much above the *sailáb* rate as will allow for the greater yield and greater security to cultivation assured by the well irrigation. It would be manifestly wrong to use a well rate, for one well may have an attached area of only 20 acres and another as much as 40 acres. If the rainfall is favourable and wheat crops are grown on both, the greater irrigation power possessed by the smaller well will hardly affect the yield. If six waterings only are required it does not profit the owner of the smaller well estate that he would be able to give double the number if needed. The wells out of reach of floods but still near to the river, form a class intermediate between the lowland wells and those in the upland villages under the *Bár*. As compared with the *Bár* wells they are less expensive to work; the area under crop not being so dependent upon rain is less variable as the propinquity of the river probably moistens both the air and the soil; cultivators are more easily obtained; *taccavi* advances to tenants are rare; and the areas are limited in extent. Though the conditions of agriculture are in their case very dissimilar to those of the wells in the flooded lands, they are at the same time different from those that obtain in the case of wells more distant from the river. The difficulties with which well cultivation has to contend in the *Utár* exist but are much mitigated in the case of wells near the river but out of flood range. The typical *Utár* well possesses an area far larger than the annual area ever cultivated. It may be put at twice as great. There are from year to year great variations in the area under crop, according as the rainfall is good or bad. The maximum of cultivation in a favourable year will, I estimate, exceed that of a year of deficient rainfall by 50 per cent, in some cases the variation may rise as high as 100 per cent. However large the well area may be, no more land will be sowed in any given year than what the cultivator considers he will be able to thoroughly irrigate. Fallows are largely used as a means of reinvigorating the ground; but to allow the fallow area to enter into the calculation of a well assessment would be wrong. The fallows are not a measure of possible cultivation in any year *in addition* to the recorded cultivated area. A well at measurements may have a fallow area equal to or greater than the area under crop, but its irrigation can only enable a limited area to be cultivated year by year, varying according to the rainfall. Fallow well lands differ from *sailáb* fallow in the essential point that the *sailáb* fallow may be cultivated in addition to the recorded area under crop in any year, but in seasons of the most favourable rainfall the total cultivated and fallow area of an upland well will never be all under crop within the year. The average area that a well cultivates is not affected by the fallow area attached. The advantage of being able to leave land fallow lies in the thereby increased outturn per acre, but the existence of a large fallow area has no tendency to increase the area under cultivation from the well. Apart therefore from the question of how much lower than the assess-

ment on wells near the river that on upland wells ought to be, the process by which their assessment has been determined is somewhat different.

184. In assessing these tracts the object in view has been to frame an average jama or rate per well for each circle. As the system adopted in the assessment of cultivated areas on these wells are liable to great fluctuation it became necessary to first estimate the area which is on the average actually cultivated from a well in each circle. The data on which my estimates in each case were based consisted of the average areas per well according to the returns of previous Settlements, the average areas per well in the different villages, and also in the circle according to the present Settlement returns, the knowledge that the year of measurements was for some circles more and in others less favourable than the average. Having seen most of the wells in every village of each circle I relied to some extent on my personal estimate of what area was usually cultivated on a well. Comparisons were made between the averages of the different circles and these again checked by my knowledge of the general circumstances and conditions of the villages in each. When the area had been determined the next step was to estimate what a well in each circle might be called upon to pay. Here the considerations were much the same as those kept in mind in estimating the area. The rates assessed at previous Settlements were the basis of the calculations. The other factors in the calculation did not differ from those that entered into the process of determining the acreage rates for well lands in the river circles. I also knew the general character of the villages in each of the circles. I could say that the wells in one were good and could pay a higher revenue than in another, and I did not hesitate to vary the rates' assessment in individual villages to any extent that my knowledge of the village indicated to be necessary. When a rough estimate had been made it was applied to the estimated area annually under cultivation and the incidence per acre ascertained. When the well rate had been fixed it was next necessary, using it as guide, to assess the villages of the circle and to find out how far the amount could be actually assessed differed from the rates' jama. Finally one's mind was made up, the jamas announced, and the subject dismissed.

The upland well rates. 185. The rates sanctioned and used are given in a tabular form below.

TAHSIL.	DETAIL.	CIRCLES.			
		Centre.	Bár.	Utár.	Kachi.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Chiniot	Per acre	1 2 0	0 14 0	1 1 0	...
	Per well	30 0 0	24 0 0	32 0 0	...
Jhang	Chenáb { Per acre	1 6 4	1 0 2	0 12 0	...
	Chenáb { Per well	23 0 0	17 0 0	18 6 0	...
Jhelam	Jhelam { Per acre	1 4 0	...	...	1 1 7
	Jhelam { Per well	26 0 0	...	...	17 0 0
Shorkot	Per acre	1 6 0	1 1 3	...	1 0 5
	Per well	19 0 0	16 12 0	...	16 0 0

186. The difference in the conditions of agriculture on the upland wells as compared with those near rivers has been noted together with the fact that in the Bár and Kachí circles of Jhang and Shorkot a system of assessment fluctuating with the number of wells at work at each harvest has been introduced. The nature of this fluctuating assessment and the reasons for its introduction are given in the following paragraphs. I quote from the Assessment Report on the Shorkot tahsil. The system was first proposed for the Bár and Kachí circles of that tahsil, whose agricultural conditions differ but little from those of the two corresponding circles in the Jhang tahsil.

187. "The condition of agriculture in both the Bár and the Kachí Agricultural circles is one of extreme uncertainty. Cultivation is tion of the two circles. expensive. Taccávi advances are universal. Tenants are poor and migratory. The harvests depend upon the rainfall and bad harvests are frequent. Not very much rain is required, but it must be seasonable. Large quantities of fodder crops have to be grown, as no grass, or none to speak of, except *sar* is produced in the tract. Add to this that many well lands have a tendency to deteriorate after a few years' cultivation and another and important element of uncertainty is introduced. These are the facts that first drew my attention to the need of some system of assessment more elastic than that of a fixed cash revenue, which while liberally allowing remission to impoverished villages would also recoup the Government for such losses of revenue by taxing at a light rate new wells and new cultivation."

188. "The system I propose is as follows. A jama for each village will be announced in the ordinary way. This jama will be in the first place calculated on the assets, *viz*, the number of wells in work and the area under cultivation recorded at measurements, but in the case of each village reduction or enhancement will take place according as the number of wells is found to have decreased or increased at the time the jamas are announced. The village jama announced will be distributed by *bách*, over the wells in cultivation. The jama assessed on each well will be paid by the proprietors thereof so long as the well continues to work. One portion of the jama will form the kharif instalment and one portion that for the rabi. If the well falls out of work a remission will at once be given dating from the harvest after the well ceased working. For example, if a rabi crop was raised and gathered and the well fell out of cultivation immediately after, before the Kharif crop was sown, then the rabi instalment will be collected and the remission commence with the kharif instalment. *There will be no measurements of the crop area year by year.* If there is a crop of any description, however poor it may be, the well owner will be liable for the full instalment of the harvest at which that crop is reaped. Though this system may cause some little loss in bad seasons, still the proprietor will in good seasons gain largely, for my assessments are exceedingly moderate. Without annual measurements some inequalities must exist, and I would sooner propose a fixed cash assessment than recommend annual measurements for the scattered wells of this circle. Temporary remissions can be given for crops that have been injured by hail, locusts, blight,

or any other cause, but they should not be given freely, as my assessment is quite low enough to protect the well owner from ordinary calamities of season. When a well assessed at this Settlement subsequently falls out of work and is afterwards again brought into cultivation, the jama assessed at the well at the original *bach* will be at once reimposed. No grace will be allowed, and the demand will recommence with the instalment of the harvest the crops of which are first cultivated. What I have written above disposes of wells assessed at Settlement. Next comes the question of how to assess wells subsequently brought into cultivation, whether they are new wells or only old wells repaired. New wells I propose should be allowed to remain revenue-free for three years, after which they will come under assessment. For old wells repaired, I think one year's grace will be ample. There are great numbers of old wells that hardly need any repair beyond putting up the wood work, and to allow these to remain revenue-free for more than one year seems to me quite unnecessary. At the same time I do not think that three years is too long a period of grace to grant to new wells. There is a considerable amount of expense incurred in the construction of the well, in levelling the land, and breaking up the bushes and jungle. If three years is considered too favourable, I would suggest a period of two years reckoned from the first harvest grown on the well. All new wells in any given village after the expiry of the period of grace will pay at a uniform well rate, to be fixed by the Settlement Officer and to be announced by him with the other jama. This well-rate would generally be about $\frac{1}{4}$ th lower than the average incidence per well of the announced village jama. For instance, if a jama of Rs. 140 is announced for a village containing 7 wells the incidence of that jama will be Rs. 20 per well, and my well rate for new wells would be pitched at about Rs. 16. Of course variations will occur, and I may as well note two cases. First, if the village has been paying hitherto a full jama, considerably in excess of my rates, without inconvenience, I should not assess the existing wells below that jama, but I would not proportionally increase my well-rate on new wells. For instance, the incidence of the present jama is Rs. 25 per well, which is high, but it has been paid hitherto without any hardship, I would retain the present jama but fix a well-rate for new wells lower than Rs. 20. Conversely, where the resources of a village have say doubled, the original rate per well being moderate, I should probably not double the jama at once, though my rates would justify such a course. I should take a lower jama on existing wells, but I should not therefore lower my rate on new wells. For instance, the wells of a village assessed at last Settlement at Rs. 170 have increased from ten to twenty, my rates would give me Rs. 340, but I should assess at about Rs. 300. This would give an incidence of Rs. 15 per well, and I should very probably retain so low a rate as this as my well-rate on new wells. The assessment on a new well will be remitted at once on its falling out of cultivation, and at once re-imposed when again put to work."

189. "To carry out this revenue system no increase of establishment will be needed. There will be no measurements and no

Administration of the system. No extra establishment required,

additional work beyond the preparation at each harvest of a list of wells then at work for each village, and memoranda as to whether any of these wells are

not liable to assessment and why. The lambardars would give the requisite information and failure to do so, or giving false information, could at once be followed by dismissal from office. There are 44 villages in the Kachi and 17 in the Bār, with a total of 1,345 wells. To supervise the Patwaris' returns of wells in so few villages would not take very long, and now that Tahsildars have been relieved of so much judicial work, they will have abundant leisure for revenue matters. As the staples are wheat and barley for the rabi and cotton and jowār for the kharif, there will be no difficulty in deciding from what harvest the well commences to be at work. The lists of wells or kistbandis could be filed on the 1st May and the 1st November, or, if necessary, a month earlier."

190. "It will be at once recognised that the system I now advocate is no new-fangled invention. These very wells were assessed by Sāwan Mal in a very similar manner. Under his revenue administration each well obtained a lease at a rent of Rs. 12 which protected 25 bighās of cultivation, but if more land than the protected area was brought under cultivation it became liable to an additional assessment. The zemindars are always praising this system '*sathpānch bārah*' (seven rupees at the rabi five at the kharif, 12 in all) as it is invariably termed. Besides this amount there were some cesses that brought up the well jama to Rs. 15 or Rs. 16. This was only paid when the well was at work. It was at once remitted when cultivation ceased. All new wells were liable to immediate assessment. There is but a very slight difference between the system of Sāwan Mal and that now recommended. His was a fixed minimum well jama for all wells, increasing in the case of good wells with an increase of cultivation beyond a fixed area. My well rate is differentiated according to the resources and assets of the various villages, but once imposed is not susceptible of enhancement. At the first Settlement Mr. Monckton himself saw the necessity of assessing the upland wells on some fluctuating system. Mr. Cust, in his review of the Jhang Settlement report, para 22, wrote: "In this district wells have been sunk with a convenient *arrondissement* of land by different families and races, and have been fortuitously aggregated in mahāls, and Mr. Monckton and Colonel Hamilton deprecate the introduction of the village system and the bugbear of joint responsibility." Mr. Cust then quotes a letter from Mr. Edmonstone, of which a few extracts must be given: "On the one hand it seems absolutely impracticable to recognize each well as a separate and independent mehal, or to realise revenue from each, as Mr. Monckton suggests, by rates annually assessed according to the nature of the crops, for if there were no other objections to it, the mere fact that no district officer, without an immense increase to his mehfassil establishments and a large additional expense, would have time to supervise the working of such a system, would render it impracticable." In the same letter Mr. Edmonstone admitted that joint responsibility seems to be an anomaly if not an absolute injustice, but he was extremely unwilling to allow any departure from the established Revenue system. Mr. Cust wrote in his summing up, para 25: "I admit that all these peculiarities point very distinctly to the necessity of a light assessment and to periodical revisions of the record of rights, but nothing more. We cannot consent to collect

a separate demand from several thousand wells and let loose a swarm of Revenue subordinates on the district. It rather seems that in the heat of argument in the case, 'individual wells as separate Mahals *versus* joint responsibility,' the minor question of fluctuating assessments was somewhat slurred over. Mr. Monckton's proposal, too, rested on the basis of annual measurements and a differentiated rate on crops which seem to have wrecked the project. My system in effect will abolish the principle of joint responsibility, though in name and in law it will remain. This may be a result but it will not be, I think, an objection. It would also draw attention to para 9 of the Settlement Commissioner's review of Mr. Purser's report on the Montgomery Settlement."

191. "I have already noted the causes which render agriculture in these two tracts so precarious and result in such ups and downs in the condition of individual zemindars and of whole villages. Under a fixed cash demand the inequalities that arise are of two kinds, the first in the assets of one village as compared with that of others; the second in the assessments paid by different wells in the same village. When the assessment is fixed there is always a great disinclination on the part of the revenue authorities of the district to recommend remissions. Violent changes occur in the resources of a village and in its ability to pay the assessment, while not the least variation takes place in the demand. It often happens, too, that the assets of a village do not diminish but even increase while the internal distribution of the jama, by reason of assessed old wells falling out of cultivation, and the construction of new wells that are not assessed, has become most unequal and most unfair. The remedy of course is a fresh *bach*, but this has hardly ever been applied. What does actually happen is exactly what has been described in the para of the Settlement Commissioner's review on the Montgomery Report, before referred to: "The fact is, that it is very seldom that either of these measures (transfer or lease of the defaulter's well) are feasible in the case of wells in the Thal or Bár tracts. The other well owners are either unable or unwilling to work a second well and no tenants are available. The well therefore lies waste till the owner returns, which may not be for years, if ever. As to the revenue, what really happens is, that the lambardár year after year follows the defaulter to the riverside villages where he is cultivating as a tenant, or the place where he is grazing his cattle, and exacts from him the revenue of the deserted well. When he absconds to a distance or is reduced to utter beggary, then the lambardár almost always has to pay up the balance himself. The other well owners are still ignorant of our rules on the subject, and strongly repudiate responsibility." I have nothing to add to this except that the greater number of proprietors in the Kachí are Beloches who mostly have relations along the Indus, and who do not hesitate to migrate there in bad seasons, leaving the lambardár to pay up as best he can the revenue due from them. It is a curious fact that the lambardárs should never have resorted to the *bách*. If a lambardár represented that a portion of the revenue was year by year irrecoverable, that he had hitherto paid this out of his own pocket, but that he now wished the theory of joint responsibility to be enforced and a new *bách* carried out,

as far as I understand the Revenue Code, the application must have been sanctioned. As a matter of fact I do not think a single new *bách* has been effected in any of these villages since the last Settlement *by order*. Here and there where old wells have fallen out of work and a number of new wells constructed, the assessment of the old has been *báched* by private arrangement on the new. These cases are few and the *bách* is always very imperfect and unequal."

192. "A tabular statement is subjoined showing the fluctuations in cultivation of the villages to which remissions have been granted :

VILLAGE.	DATES.	WELLS.	CULTIVATION IN ACRES.	JAMA.	INCIDENCE.		REMIS- SIONS SANC- TIONED.
					On cultiva- tion.	Per well.	
Sábki ...	First Settlement ...	27	545	Rs. 438	Rs. A. P. 0 12 8	16 3 0	Rs. A. P. ...
	Present Measurement	25	401	468	1 2 8	19 0 0	105 0 0
	1877... ..	17	349	468	1 5 6	27 8 0	...
Siálkot	First Settlement ...	20	383	325	0 13 6	16 4 0	..
	Present Measurement	15	261	325	1 3 11	21 11 0	172 14 0
	1877... ..	9	143	325	2 4 4	36 1 0	...
Gadára	First Settlement ...	25	622	450	0 11 7	18 0 0	...
	Present Measurement	14	203	450	2 3 5	32 2 0	150 0 0
	1877... ..	...	...	...	...	...	...
Kapúri	First Settlement ...	21	343	400	1 4 4	18 5 0	...
	Present Measurement	21	232	435	1 4 11	20 11 0	73 0 0
	1877... ..	17	244	435	1 12 6	25 9 0	...
Dúl ...	First Settlement ...	53	1,432	950	0 10 7	17 15 0	...
	Present Measurement	31	872	982	1 2 0	31 11 0	295 0 0
	1877... ..	21	687	982	1 6 10	46 12 0	...

The measurements of this Settlement took place in 1874-5. In Kapúri the deterioration was slight, but the incidence of the jama was heavy, and the village was quite unable to pay the jama on the wells that had fallen out of cultivation."

193. "The history of cultivation in Mauza Dolowána will also give a good idea of how it is possible for cultivation to fluctuate. At the first Settlement there were 47 wells at work assessed at Rs. 879. In 1877 29 only of these wells were at work assessed at Rs. 521, and there were 18 out of work assessed at Rs. 358. Between 1856 and 1877, at various times, 34 other wells had been at work. Of these in 1877 9 were out of work and had never been assessed; 8 were still at work unassessed; 7 were still at work assessed at Rs. 70; 10 were out of work assessed at Rs. 53. That is, when the case, one of application for remission, came before me the account showed that the sum of Rs. 288, out of the original jama of Rs. 879, was assessed on wells out of work and that 15 new wells only paid Rs. 70. A stronger case in favour of my system could not be given. A careful and annual *bách*, on equitable principles, would meet the difficulties to a certain extent, but not I think nearly so completely as a fluctuating system."

194. "It was in reference to these remissions that the Financial Commissioner has lately passed a stringent order directing that in all cases of distress remissions are to be at once recommended, and that, where the demand has become unequally distributed in the particular village, a fresh *bách* is to be at once carried out. The effect of this order will be that applications for remissions will be sent in very much more frequently than has been the case hitherto. It must be carefully borne in mind that a fixed assessment, however light in these two circles, will not prevent individuals or villages from being ruined by bad seasons or desertion of tenants, and that though these evils may be to some extent remedied by remissions of a temporary or permanent character, yet that the Government will never be able to recoup itself for remissions given in one village by enhancing the revenue of another. Even with the late orders of the Financial Commissioner, I fancy relief will be given tardily under a fixed system of assessments. Remissions will not be given at once when wells fall out of work, and the payment of two years' revenue on lands that have fallen out of cultivation will certainly do much to impoverish the proprietors. On the other hand I claim for the proposed system the virtue of relieving, in fact preventing distress, so far as the revenue is concerned. In seasons of drought, when wells are deserted and fall out of work, the relief is instantaneous. There is no tardy investigation, no attendance at the Tahsil. The list of wells in work is prepared, and on them only is the revenue collected. If, when wells fall out of cultivation in any village, remissions are to be at once given, or if, where new wells have been constructed, a new *bách* is to be at once effected, it is not improbable that the following evil may arise. The tenants, or even the proprietors of a village where the soil is poor, might find it to their interest to throw their own assessed wells out of cultivation and migrate to new unassessed wells in a village where agriculture was carried on under more favourable conditions. Proprietors might desert their wells in one village and get remissions on them, and yet bring into cultivation a large number of wells in another village. Migration of proprietors would not be common, but there is nothing to prevent tenants from shifting from one village

to another as it suits their interests. Instances in support of this possibility are not wanting. At the first Settlement Uch had 45 wells at work and now there are 28, while in the two adjoining villages of Dargahí Sháh and Lishárí the number of wells has increased from 21 to 45 and from 41 to 68. Darí Gondal and Gadára are similar instances. There are probably not a few of the old Uch tenants-at-will now cultivating in the two adjoining villages."

195. "The above is the case for the fluctuating assessments. I next propose to meet a few of the objections that may be raised against it. The first is the objection that by taxing new wells the extension of cultivation will be checked. The answer is that when a similar system was in force under Sáwan Mal, cultivation did not decrease but increased. The introduction of the system is wished for by the zemindars and will be heartily welcomed by them. It may be assumed that the people are quite alive to their own interests in such a case, and are well aware which system will suit them best. Another objection to fluctuating assessments is, that they entail an additional establishment and an increase of expenditure. This does not apply to the system advocated, as under it there will be no measurements. A possible objection is that a system taxing all new wells in any village at one fixed rate without respect to quality of soil or area under crop, is unequal in its effect. It is so undoubtedly, but in a very minor degree. Perfect equality of demand is never even attained by annual measurements of the area and differentiated rates upon crops. Crops are better in one village than another, in one portion of the same village than in another. I do not think this imperfection which exists in all of our systems of assessment should be allowed to have much weight. It has also been partly obviated by my plan of having high rates in the better and low in the inferior villages. I admit it is quite possible that the construction of inferior new wells, that could have been cultivated at some small profit, if unassessed, will be prohibited by my assessment of new cultivation. At the same time I think this is no evil, it is better that such wells should not be constructed. One thing will have to be guarded against, and that is the possibility of a man finding it profitable to sink a new well, cultivate it revenue free for three years, and then abandon it and sink a second with which the process is repeated. In my opinion a period of three years' grace will not be sufficient for such devices, and there are but few men who have the land on which to make such experiments."

196. The above system as originally proposed has been sanctioned without any alterations, and was introduced with effect from the spring harvest of 1880, into the Bár and Kachí circles of tahsils Shorkot and Jhang. Two villages in the Wasat Chenáb circle of tahsil Jhang also elected to be placed under the system. According to the girdáwári made before the rabi harvest, 176 wells recorded as at work at measurements had fallen out of work and 166 wells had been brought under cultivation in the villages under the system.

197. Though it was found that the jamas given by the produce estimates were far heavier than what could be actually assessed, it must not be supposed that these calculations

were carelessly or perfunctorily made. A produce estimate is made up of four factors, the area under crop, the crop yield per area, the share taken by the landlord after the Kamiána and fodder deductions, the price current used to convert the produce into a money value. As the actual assessments are so much below the jamas indicated by the estimates, the real matter in issue in the case of each factor is : "Is the estimate too high?" I think I shall be able to show that none of the estimates are excessive.

198. Is the area under crop overstated? The baráni lands are so small The area under crop. in area that they may be passed over without notice. Sailáb lands. In the case of sailáb lands the only question is was the year of measurements more favourable than the average year or not. I think that it was somewhat above the average, but nothing more. The girdáwari of 1877-78 showed that after a year in which the rivers had remained unprecedentedly low, the area that fell out of cultivation was 25 per cent on the upper Chenab, 12 per cent on the lower Chenab, and 7.6 per cent on the Jhelum. These percentages show that the sailáb area under crop on the Jhelum and lower Chenab at measurements cannot have been much more extensive than the area in ordinary years. On the upper Chenab I know that fluctuations in the area cultivated are very great, but after three years experience I am not prepared to admit that even the upper Chenab sailáb area has been overstated to any considerable extent. There is no system of agriculture, no rotation of crops obtaining in sailáb lands that could have the least influence in tending to render the measured area under crop of any year an overstatement *ceteris paribus* of the actual area annually cropped. The same land bears a crop year after year so long as it is flooded or moistened by the river. In fact it is far more likely that the sailáb area as a basis for a produce estimate has been understated, as land lying fallow or ploughed up for a crop was not recorded as under crop. At measurements lands cultivated and under crop during the year were recorded in four classes : 1st, as under crop ; 2nd, as lands ploughed up beforehand and prepared for sowing 'halor,' 'báhan' ; 3rd, as fallow of one year, 'appar' ; and 4th, as fallow of more than one year, 'jadíd.' The area under crop is class 1 plus any double-cropped area. The cultivated area is class 1 plus class 2.

199. In the case of wells it is probably that in individual instances the The area under crop. area under crop has been overstated in the case of Well lands. upland wells, where fallows are largely made use of. But here again the average well areas of the circles including 'halor,' that is, excluded from the area under crop, are, except in Chiniot and some few villages in the Utár Vichand circle of Jhang, by no means high. I give them below in acres :—

TAHSIL.	CIRCLES.			
	Centre.	Bár.	Utar.	Kachi.
Chiniot...	26.5	26	30	...
Jhang ... {Jhelum...	20.7	...	...	15.5
{Chenab...	16.5	16.8	24.5	...
Shorkot...	15.0	15.4	...	15.8

As averages I do not consider that these areas are anywhere high, except in the Bár and Utár circles of Chiniot and the Utár Vichand circle of tahsil Jhang. They are almost all lower than the average areas per well of last Settlement. If it be supposed that the area returned as under crop for the district is overstated by even 20 per cent, even then the assessments are more than 20 per cent below the jamas of the produce estimates. But it is clear that the areas are not overstated to this extent. If they were then in Shorkot the average area attached to a well annually under crop is only 12 acres, which is absurd.

200. The assumed yield in maunds per acre on the various soils for the assumed rates of different crops is given below for Jhang and Shorkot. The Chiniot produce estimates were framed by Mr. Fryer, and will be noticed separately.

CIRCLE.	TAHSIL.	ASSUMED WHEAT YIELD PER ACRE.			
		Cháhí Khális.	Cháhí Sailáb &c.	Sailába.	Barání.
		Mds.	Mds.	Mds.	Mds.
River Jhelam ...	Jhang	9	10	7½	5½
River Chenáb {	Jhang	9	9	6½	5½
	Shorkot	9	10	7½	6
Centre Chenáb {	Jhang	9	9	6½	...
	Shorkot	9	10	6½	6
Centre Jhelam...	Jhang	9	10	7½	5½
Kachí {	Jhang	8½	...	6	5½
	Shorkot	8	10	...	5
Bár {	Jhang	8½	...	...	...
	Shorkot	9	...	6½	6
Utár Vichand ...	Jhang... ..	8½	9	6	...

For jowár, cotton and barley, the differentiated rates were :—

TAHSIL.	SOIL.	COTTON.	JOWAR.	BARLEY.
		Mds.	Mds.	Mds.
Shorkot {	Cháhí Khális	4	6	10
	Cháhí Sailába &c.	5	7	11
	Sailába and Barání	3	5	8

TAHSIL.	SOIL.	CIRCLE.	COTTON.	JOWAR.	BARLEY.
			Mds.	Mds.	Mds.
Jhang ...	Cháhi Kháls ...	River and Centre Jhelam	5	7	11
		Rest of Tahsil	4	6	10
	Cháhi Sailáb &c.	River and Centre Jhelam	5	7	12
		Rest of Tahsil	4	6	10
	Sailáb & Barání	River and Centre Jhelam	3	5	8
		Rest of Tahsil	3	5	7

Besides wheat, cotton and jowár, the only other staples are gram, turnips, mung-másh and peas. I give the assumed rates of yield below :—

	GRAM.	TURNIPS.	MÁSH-MÚNG.	PEAS.
	M. S.	Rs. A. P.	M. S.	Rs. A. P.
Jhang	6 0	12 2 0	5 0	6 0 0
Shorkot	5 30	12 0 0	5 20	8 0 0

The above crops occupy in Shorkot 92 per cent and in Jhang 93 per cent of the total area under crops. The rates assumed for other crops will be found in Statement D. of the appendices. I do not think that any of the assumed rates of yield are likely to be objected to as being too high. In Chiniot the produce estimate was based on soils. A list was first made of the various soils known under different names by the people. They were graded as 1st, 2nd and 3rd class, and further made subsidiary to the three main divisions of all land into cháhi, sailába, and barání. A rate of produce for each crop was fixed for each of these classes under each main head of cháhi, sailába and barání. Taking wheat as an instance, the assumed rates were, in maunds :—

CHÁHI.			SAILAB.			BARANI.		
1st.	2nd.	3rd.	1st.	2nd.	3rd.	1st.	2nd.	3rd.
14	9	6	12	8	4	7	5	...

In the gross result the Chiniot estimate gave much the same results as those for the other two tahsils, the half net assets being calculated at '15 of this gross produce against '18 and '17 in Shorkot and Jhang.

201. The assumed price currents for the staple crops of each tahsil are The price current adopted, given below in sers per rupee :—

	KHARIF.					RABI.			
	Cotton.	Jowár.	Másh Múng.	Til.	Bájra.	Wheat.	Gram.	Turnips.	Peas.
	S.	S.	S.	S.	S.	S.	S.	Rs.	Rs.
Chiniot	12½	32½	23	15	27½	30	33½	12	6
Jhang	12½	34	28	15½	27	30	40	12	6
Shorkot	12½	32	{ Másh 27 Múng 30 }	15	27½	30	36	12	8

I do not think the adopted prices are too high. They rather err on the side of lowness. It is probable that the average price current of the next 20 years will show considerably higher rates. The opening of the railway to Kurrachee and the thereby increased facility for exporting grain to Europe will most certainly tend to keep up the prices of food grains in the Punjab. It will prevent all accumulation of grain. As soon as the price of wheat falls to the point at which it becomes profitable to export it to Europe it will be exported, and prices will hardly ever fall below this minimum. In Jhang the prices of food grains depend almost entirely upon the prices ruling in other districts. A good harvest does not necessarily bring down prices unless harvests elsewhere are good and prices falling. The food grains produced in Jhang do not suffice for the consumption of the resident population and large imports are made from outside districts. The wheat harvest of 1878 was above the average, and that of 1879 a bumper crop. Yet prices were higher after both than during the famine year of 1868-69. If exportation to Europe maintains the prices of the food grains in the Punjab at a steady high rate, prices in this district will be generally a little higher, because the home production is deficient, and the price of grain grown in Jhang will always tend to rule at a rate equal to the price of grain in adjoining districts plus the cost of carriage to Jhang. For these reasons I think that the prices assumed are far more likely to be lower than higher than future prices.

202. The deductions made on account of fodder crops consumed by the tenant and kamiána fees are full and liberal. The Deductions on account of fodder and kamiána. allowances for fodder crops include all the turnips and all the metra sinji &c. with half an acre of wheat and half an acre of jowár per well per annum. Bhúsa has not been included in the account, as with the exception of sailáb land's bhúsa, but very little reaches the hands of the proprietor. The percentage of the value of the fodder deductions on

the gross produce in each Tahsil and the percentages estimated as taken by Kamiána fees &c. are given below :—

	CHINIOT.	JHANG.	SHORKOT.
Fodder	12	12	11
Kamiána	19	16	17

The share of the produce taken by the proprietor is not an estimate but a ascertained fact, and admits of no question.

203. The statement below gives the figures of the half net assets estimate for the three tahsils, also the same arranged in percentages, in thicker type :—

	CHINIOT.	JHANG.	SHORKOT.	DISTRICT.
	100.	100.	100.	100.
Gross produce	10,89,545	14,19,045	9,81,959	34,90,549
	12.	12.	11.	12.
Deduct fodder	1,80,745	1,70,285	1,06,015	4,09,045
	88.	88.	89.	88.
Balance	9,58,800	12,48,760	8,73,944	30,81,504
Kamiána rate per cent.	19.	16.	17.	17.
Kamiána	1,82,172	1,99,802	1,48,569	5,30,543
	69.	72.	72.	71.
Balance	7,76,628	10,48,958	7,25,375	25,50,961
Rate of batái	42	47	49	46
	30.	34.	36.	34.
Net assets... ..	3,26,114	4,93,010	3,55,434	11,74,628
Half net assets	1,63,092	2,46,505	1,77,717	5,87,314
Share of gross produce	15	17	18	17
Actual assessments, Statement E ...	97,608	1,51,072	1,09,597	3,57,377
Share of gross produce	89	106	112	102

204. The reasons why we cannot take a cash revenue equal either to

Why the assessments are below the produce estimate.

the half net assets estimate or to $\frac{1}{4}$ th of the gross produce are these. In the case of wells the initial cost of construction, the expenses of maintenance, interest on taccávi advances to tenants, insurance against the loss of the advance itself, losses from occasional failures of crops, have all to be considered in fixing the assessment, but cannot be accurately shown in the tabulated statement of a half net assets estimate. The share of the produce which the landlord gets varies from .29 in Chiniot to .36 in Shorkot. In Jhang it is .34. The average is about .33 or $\frac{1}{3}$ rd. Now if the Government demand is fixed at $\frac{1}{4}$ th for the rain lands of the submontane districts where there are no expenses whatever, or hardly any, to the proprietor who takes $\frac{1}{4}$ batái, it is manifest that in Jhang, where the share of the produce that actually reaches the landlord's hands is only $\frac{1}{3}$ rd, out of which much wear and tear of his capital invested in the wells and advances to the cultivator has to be recovered, to take half net assets will be a much heavier assessment than in districts more favourably situated. This is the reason why we cannot take more than $\frac{1}{4}$ th of the gross produce equal to about $\frac{1}{3}$ rd of the net assets.

Comparison between the district assets at the Regular and Revised Settlements.

205. The district assets at last Settlement and now are compared below :—

	AREA UNDER CULTIVATION.				WELLS AT WORK.	YOKES.	POPULA- TION.
	Cháhi.	Sailáb.	Baráni.	Total.			
	Acres.	Acres.	Acres.	Acres.			
Regular Settlement	1,90,883	60,347	1,773	2,53,003	8,710	33,872	2,50,736
Revised Settlement	2,27,299	98,748	3,480	3,29,527	11,018	45,754	3,17,266
Increase + }	+36,416	+38,401	+1,707	+76,524	+2,308	+11,882	+66,530
Decrease — }							
Percentage	+19	+64	+96	+30	+26	+35	+27

The statement subjoined gives the District assessments as they stood at last Settlement and as they stand now :—

	1st Summary settlement.	2nd Summary settlement.	Regular settlement.	Demand of last year.	Revenue rates jama.	Present assessment.	Rate on cultivation
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.
Chiniot	82,863	61,246	67,472	70,997	99,962 96,956	96,708	0 15 10
Jhang	1,21,519	1,02,858	1,13,246	1,22,243	1,51,326 1,49,692	1,51,072	1 1 11
Shorkot	98,808	91,448	86,649	91,117	1,08,290 1,07,214	1,10,087	1 2 2
District	3,03,190	2,55,552	2,67,367	2,84,357	3,59,578 3,53,862	3,57,867	1 1 5

The entries in the thicker types are the revenue rates' jamas on the area, as modified by river action.

The percentages of increase over the demand of the Regular Settlement and of the year preceding the introduction of the new jamas are :—

ENHANCEMENT GIVEN BY NEW ASSESSMENTS ON

	Regular Settlement Assessment.		Demand of Previous year.	
	Increase.	Percentage.	Increase.	Percentage.
	Rs.		Rs.	
Chiniot	29,236	43.	25,711	35.
Jhang	37,826	33.	28,829	24.
Shorkot	23,438	27.	18,970	21.
District	90,500	34.	73,510	26.

The percentages of increase in assets over those of the Regular Settlement are shown below :

	CULTIVATION.				WELLS.	YOKES.	POPULATION.
	Cháhí.	Sailáb.	Barání.	Total.			
Chiniot	28	247	112	52	48	49	32
Jhang	25	35	226	28	31	42	29
Shorkot	8	48	34	16	8	14	16
District	19	64	96	30	26	35	27

Of the present assessment of Rs. 3,57,867, as entered in Statement E, Rs. 39,910 is fluctuating, viz., Chiniot Rs. 1,032, Jhang Rs. 12,882, and Shorkot Rs. 25,996. All this revenue is excluded from Statement G. and deductions have also to be made on account of the 1 per cent allowed to zaildars out of the Government demand, remissions granted to wells protectively leased, and on other accounts. A full and detailed account will be found in Statement G. The demand on account of sajji, grazing dues and dates is also given in the statement. These taxes will be noticed in a separate chapter.

206. The assessments were on the whole well received. The well owners of the upland tracts are exceedingly well pleased. The jamas of the Centre Jhelam circle and of some of the Shorkot river villages were considered high, but the absence of appeals indicates that there has been no discontent. I do not know exactly, but I think only two appeals have been preferred. So long as there is an average area under crop in the river villages the assessments

How the assessments were received by the people.

should be paid up regularly. They are I think the only villages that may give rise to anxiety. Now that the four upland circles of the two southern tahsils are under a system of fluctuating assessment no alarm need be felt regarding the upland wells.

207. The system of fluctuating assessments on wells has been already described. In river villages there are two phases of the system. In one the well estates in which wells are at work are given a fixed assessment and all the area outside the well estates under fixed assessment is held to be under a fluctuating assessment. The cultivation in the portion under fluctuating assessment is measured up annually and assessed at fixed village rates. On the Ravi different rates for lands irrigated by jhallárs and for pure sailáb lands were framed, as there is a considerable amount of jhallári cultivation in the villages which is much more valuable than sailáb. The sanctioned rates were Re. 1-4 for jhallári and Re. 1 sailáb. The other phase is where the whole village area is placed under a fluctuating assessment and the cultivated area measured up year by year and assessed at one rate, that for sailáb. If there are any wells at work a fixed sum to be paid annually in addition to the fluctuating assessment is imposed upon them, calculated to represent the difference between the irrigated and unirrigated sailáb rate. For instance, there are 10 wells with an area of 200 acres of cháhi cultivation. At Re. 1-4 per acre the assessment amounts to Rs. 250, but at Re. 1, the sailáb rate, the demand only amounts to Rs. 200. The difference constitutes the fixed abíána to be levied on the wells. This abíána is fixed and is paid annually in addition to the demand given by the rate on the cultivation of the year. In addition to the Ravi villages and the two villages in the Halkiwáh circle of Chiniot, Mianwáli and Changránwála, a few villages marginally noted in the Hethár Chenáb circle of tahsil Jhang, have applied for a fluctuating system of assessment. As yet final orders have not been received.

Fluctuating assessments.
Statistics.

208. I give below the villages in which fluctuating assessments have been sanctioned in each tahsil :—

VILLAGES UNDER A SYSTEM OF ASSESSMENT FLUCTUATING					TOTAL JAMA.
On cultivated area.		On wells.			
Villages.	Jama.	Villages.	Jama.		
	Rs.]		Rs.		
Chiniot	2	1,032	...	...	Rs. 1,032
Jhang	...	...	42	12,882	12,882
Shorkot	9	3,138	60	22,858	52,996

CHAPTER VIII.

MISCELLANEOUS REVENUE.

209. The sources of Miscellaneous revenue with which this Settlement has been concerned, are dates, sajji produced within village boundaries, trinni or the grazing tax, and leased wells in Government waste.

Miscellaneous revenue.

210. There are no date assessments in Chiniot, as the palms are few and nowhere found in sufficient number to be worth assessing. The number of palms and the assessment for the old and the new settlements are given below:

Date assessments.

TAHSIL.	THE REGULAR SETTLEMENT.				THE REVISED SETTLEMENT.			
	Female.	Male.	Small.	Jama.	Female.	Male.	Small.	Jama.
Jhang	28,060	21,673	111	903	39,348	25,591	61,885	1,637
Shorkot	20,992	12,212	11,218	1,176	22,233	15,059	23,229	1,458
District	49,052	33,885	11,329	2,079	62,581	40,650	85,114	3,095

The total number of female palms were found to be 62,581 as against 49,052 of last Settlement. The rates used in the assessment were 1 anna per female in Shorkot and in Jhang, 9 pies in the villages on the Jhelam, and 6 pies in those on the Chenáb. In Shorkot Mr. Monckton's rate is not forthcoming. In Jhang his rates were 1 anna to 9 pies in the tract trans-Jhelam, and 6 pies in the villages on the left bank of the river. In Jhang there are very few trees on the left bank of the Chenáb. On the right there are some groves. Most of the assessed palms are in villages on the Jhelam. Date palms are found in most villages on the lower Chenab. The dates of Shorkot and Mfrak are the best. The outturn of fruit per tree varies considerably. A maund is the maximum. The retail price of dates also fluctuates greatly. The best Shorkot dates are worth Rs. 8 a maund, the worst Rs. 1-4. The date crop is usually sold in the green, some time before it ripens. The proprietor thus escapes all risk, but obtains only half the price the dates will fetch at retail prices if they year is a favourable one. The purchaser takes the risks and they are many. He is also liable for certain charges, the pay of the watchman at the rate of $\frac{1}{15}$ th produce, *rakhát*, and the man who gathers the dates at the rate of $\frac{1}{15}$ th, *charhát*. The great enemy of dates is rain. Early and continued rain rots them, and the whole crop is often lost. Estimating the average outturn of a palm at 16 seers and putting the *rakhát* and *charhát* charges at $\frac{1}{8}$ th we have 14 seers left, worth 7 annas at Re. 1-4 a maund. Half of this is $3\frac{1}{2}$ annas, the Government share. But this rate cannot be taken because of the

uncertainty of the crop's ripening in good condition. The same palm I am told never bears well two years running. A good crop every alternate year is as much as can be hoped for.

The Sajji assessment. 211. The sajji assessment statistics are given below :—

	LAST SETTLEMENT.		PRESENT SETTLEMENT.	
	Villages.	Jamas.	Villages.	Jamas.
		Rs.		Rs.
Jhang	9	99	7	170
Shorkot	17	564	10	655
District	26	663	17	825

The amount in Jhang is trifling. The assessments in Shorkot are much higher ; in Mauza Bhangú the demand on account of sajji is Rs. 300. The sajji crop depends upon a year of favourable rain-fall, especially rain is needed after the plants have been pruned. Hitherto the lambardárs have alone held the sajji leases, and borne the profit and loss. In this Settlement I have adhered to the old principle, and in only one case has a person other than a lambardár been given a share in the lease. In the pattahs given to the contractors, their rights in regard to the exclusion of cattle &c. have been carefully defined. The sajji is manufactured by professional sajji makers, to whom this business is entrusted by the lessee. They get half the produce as their wage. Some other payments are made to the watchman, and the blacksmith who assists in the process.

212. The following account of the trinni tax which has been collected from correspondence in the district office, commencing with the year 1851, will be of service to district officers. The origin of trinni is not traceable farther back than the Afghán rule. Its introduction into every part of the Jhang district was not contemporaneous. When Syudwálla* was reduced by the Sikhs, the Kharrals were called upon to pay a heavy tribute. As they had little or no cultivation the tax was distributed over their cattle. At the time of Kamar Singh this revenue amounted to Rs. 50,000, and in Kharrak Singh's reign to Rs. 35,000. Díwán Sáwan Mal introduced a new system. He caused an enumeration of the cattle to be made, and taxed each head by imposing the following rates. Female camels, Rs. 2 ; male camels, Re. 1 ; milch buffaloes, Re. 1 ; cows, 6 annas. The tax first fixed at Rs. 32,000 was reduced in Sambat 1903 to Rs. 25,000 and subsequently to Rs. 18,000. In Jhang no trinni was levied by the Syál chiefs. It was first imposed by Súján Rái about 1813 A. D. His rates were—camels, female, Rs. 1-8, male, Re. 1 ; cows,

Note.—Syudwalla was for a few years after annexation included in the Jhang district.

4 annas ; female buffaloes, 8 annas ; goats and sheep, Rs. 1-4 p. tax was fixed at Rs. 11,900 and 40 camels. When Sāwan Mal of the Multān province an enumeration was made, the rate raised to Rs. 2, and a re-distribution of the quotas payable trinni guzars effected. The tax was raised once, but in Samba fell to Rs. 10,000. At annexation the grazing rates were :

	Rs.	A.	P.	
Camels, female	...	1	10	0
" Male	...	1	0	0
				Cows ...
				Female buffaloes...

Sheep and goats, Rs. 2 per hundred.

In Shorkot sheep and goats were not taxed. In Uch the trinni been leased with the land revenue. In 1904 Sambat the tax in Uch only Rs. 1,820. In Chiniot trinni was first imposed by Jassa Singh and at first the collections amounted to Rs. 5,000 only. The tax was by Sāwan Mal to Rs. 10,000. Subsequently reductions were given amounted in Sambat 1903 to Rs. 3,093 only, the trinni in a few vill included with the land revenue. In Ranjit Singh's time Shorkot the Kharrals. In Kamāliā trinni was first levied by Ranjit Singh was paid in kind, 1,100 camels. Subsequently a cash assessment of 1 was substituted. Sāwan Mal reduced the tax to Rs. 15,000. In Samba the tax was only Rs. 11,078. The rates in this tract were high elsewhere, and calves were taxed.

213. The origin of the Sadr trinni guzars was as follows. During the earlier days of the Sikh rule the population of the district appears to have been divided into bodies owing a kind of feudal allegiance to a number of chiefs. These chiefs paid a portion of the trinni tax, but the larger share their followers. When Sāwan Mal imposed his trinni tax, it was distributed among these chiefs, each taking the responsibility for his allotment. Collections were made by the chief from his adherents. Often there were Sadr trinni guzars for the body made up of the clansmen of the chief other people his followers. The tax was collected irrespective of boundaries. Changes in these bodies, as they were called, by secessions and surrenders of graziers, were constant. The cattle of the followers of any trinni guzar were not restricted to any particular portion of the Bár. He paid his quota of the tax, the cattle owner could graze his cattle not through the whole of the Jhang Bár, but even in the waste of adjoining districts. Trinni was collected from him wherever he grazed by his own Sadr trinni guzar. If he went to another district his name was transferred to the rolls of that district. Colonel Hamilton in 1851 thought it "impracticable to collect the tax from cattle grazing within defined limits," and "inexpedient to restrict cattle to any particular boundaries," and that "the only feasible system is that which has hitherto prevailed." Before annexation "the tax on cows and buffaloes was only levied from owners who were strictly cattle feeders and not cultivators, and those of all *bond fide* cultivators were exempt. The cattle grazing in the river *belas* were taxed, unless they belonged to cultivators. This was only natural, as no land tax was imposed on these lands." The Sadr trinni guzar got assistance from the local authorities.

He was personally responsible for his share in the lease to the Kárdár. The grazing rates first fixed for Jhang were—

	Rs.	A.	P.		Rs.	A.	P.
Camels male ...	1	8	0	Bár Buffaloes ...	0	10	0
„ Female...	1	0	0	Villages buffaloes,	0	5	0

Goats and sheep Rs. 3-2-0 per hundred.

Cows and young animals were exempted. Only cattle actually grazing in the Bár were taxed. The collections were much lower than they had been in previous years.

214. There seems to have been but little change in the trinni administration during the first ten years of our rule. In 1860 Colonel Hamilton introduced a system that practically remained in force until 1874-75. In his Circular, 126 of 14th June, 1860, he briefly noted the causes that rendered a change of system unavoidable. Under the Sikh rule as all waste lands were considered to be the property of Government, the tax was a capitation tax on cattle. The Regular Settlement of 1855-57 defined and demarcated village boundaries, and included in them vast tracts of waste land that had previously been *de facto* Government property. These lands now belong in full property to the villages, and 'trinni' "now can be taken only from cattle grazing in lands beyond the village boundaries." Colonel Hamilton suggested that small rakhs situated between villages should be leased to neighbouring zemindars. An enumeration of cattle in the whole Division was to take place on a certain day. It was pointed out that the list to be prepared by the Sadr trinni guzárs would probably be more trustworthy than those of the trinni establishment, and ordered that the two enumerations should be compared one with the other. The rates fixed by Colonel Hamilton were :

	Rs.	A.	P.		Rs.	A.	P.
Camels, male ...	1	0	0	Milch buffaloes ...	0	10	0
„ female ...	1	8	0	Cows ...	0	4	0

Goats and sheep 6 pies.

The following animals were free :

A.—Male camels to the 3rd year.

B.—Female do.

C.—Cows and buffaloes do.

D.—Bulls, bullocks, male buffaloes, horses, mares, ponies, mules, and asses.

The system and rules to be observed in collection were embodied in 19 rules. Only cattle grazing in the Bár were to be taxed, but if one head of cattle of a village or herd was found grazing within the Bár, the whole cattle of the same description in the village or herd became liable to be taxed. All cattle liable to the tax found in the Bár, or proved to have grazed there without having been entered in the lists and registers, could be charged double, triple or quadruple rates. Villages were thus assessed yearly, nominally on the basis of a supposed enumeration of their cattle, but really in a haphazard kind of way. The villages in the cultivated portions of

the district and the herdsmen and flock-masters of the Bár were arranged in circles and each circle was placed in charge of a Sadr trinni guzár. The Sadr trinni guzár collected from the villages and herds in his circle. If he collected direct he took the whole of the 10 per cent. collection fee allowed. If the lambardárs collected and paid the tax on their villages to him they got 5 per cent. and the Sadr trinni guzár 5 per cent. The whole of the Government waste lands were undivided, and, the tax paid, the taxpayer might graze his cattle anywhere in the district. No. 5 of the rules entitled him to graze free throughout the Múltán division. A village had nominally the option of electing to be trinni guzár, *i. e.* liable to trinni or not. If the cattle of a village, alleging itself to be non-trinni guzár were caught grazing in the Bár, not only were the punitive rates above mentioned levied, but the whole cattle of the village were summarily recorded as trinni guzár, and were thenceforth charged annually with trinni. The system was one of direct management, and a large staff of daroghas, naib daroghas, camel sowars, and other myrmidons was maintained. Major Hamilton's rules were sanctioned. Mr. Cust in a memorandum on the subject noted : "In fact it is but justice to the agriculturist that a certain amount of taxation should fall on the pastoral tribes who make use of the vast Government forest ranges to which they have no title either of property or occupation."

215. In 1869 His Honor the Lieutenant Governor authorised the Financial Commissioner to lease out the grazing instead of levying the tax by enumeration in any district in which he was satisfied as to the expediency of the change. The Commissioner of Múltán on reference wrote that there were many difficulties, want of boundaries, objections of grazing community, inexpediency of increasing taxation in a time of distress. The Financial Commissioner replied that the measure must be introduced, but, if necessary, gradually. The Deputy Commissioner of Jhang was in October 1869 accordingly directed to introduce the system at once, to see that the tax was increased by at least 10 per cent., and to assist the contractors in the collection. For 1870-1 chaks were defined, and the leases were taken up by the old Sadr trinni guzárs, but the old grazing rates and mode of realisation were retained. The only difference between the new and the old system was that the cattle of the villages allotted to the particular chak could only graze in other chaks after paying a second fee. The collections were really made through the tahsil officials. In January 1871, the Commissioner changed the rates to—

			Rs.	A.	P.				Rs.	A.	P.
Camels ...	{	Male ...	1	0	0		Bullocks ...	...	0	2	0
		Female ...	1	8	0						
Buffaloes ...	{	Male ...	0	4	0		Cows ...	...	0	6	0
		Female ...	0	12	0						
							Horses and ponies ...		0	8	0
							Sheep and goats ...		0	1	0

and among other instructions directed that the people were to be informed, "that we do not want grazing to be very profitable, and would rather that they should settle down and take to agriculture," and that if the old Sadr trinni guzárs would not take up the leases they should be given to contractors who were to be assisted by Government in collection, and collect at the following enhanced rates :—

		Rs.	A.	P.		Rs.	A.	P.
Buffaloes ...	{ male ...	0	8	0	Bullocks ...	0	4	0
	{ female ...	1	0	0	Cows ...	0	8	0

No allowances were to be given and no enumerations to be made. For 1871-2 it was found that the contractors refused to engage for two-thirds of the chaks, and Mr. Wakefield accordingly "proceeded to arrange for Government management with the enhanced rates." By collecting directly Government got an increase of Rs. 35,740 on the income of the preceding year. The collection was made through the old Sadr trinni guzárs but was more carefully watched and supervised by the Deputy Commissioner. Mr. Wakefield made one more attempt to stay the introduction of the chak system, basing his contention on the arguments that contractors could not be obtained, that the old Sadr trinni guzárs would not come forward unless they were promised assistance, that to assist contractors in the collection of the tax was an anomaly for which nothing could be said, that it was preferable for Government to collect itself than to collect for contractors, and that under the new system cattle would often have to pay twice over. In reply the Financial Commissioner thought that direct management depended in too great a degree on local knowledge and experience and personal superintendence, that the chak system was more perfect as a system and more advantageous to Government. The introduction of the system from 1873-4 was ordered. Nevertheless there was but little difference between the arrangements of 1873-4 and those of the past year.

216. In 1874-5 the chak system was introduced and it is still in force except in the portion of the district lying in the Sind chak system. Saugor Doáb. Its main features are these. The Government waste lands of the Bár, the Thal, and the scattered rakhs in the Vichand have been arranged and divided into chaks. The portion of the Jhang tahsil that lies in the Vichand, between the Jhelam and Chenáb, is one chak, and the portion of the Chiniot tahsil lying on the right bank of the Chenáb another. The remainder of the district lying along the left bank has been cut up into several chaks. The chak in each case consists of the particular block of Bár and the villages lying between it and the river which if trinni guzár are attached to the block. The chak is let out annually to a varying number of contractors, called chakdárs, for a fixed sum. The villages of the chak are divided into "trinni guzár," and "gháir trinni guzár," trinni paying and non-trinni paying. Theoretically to be trinni paying or not is optional to the villages, but practically it is not. Mr. Tolbort states in his final memo on trinni that every year during January and February the villages of the district are classed into trinni guzár and ghair trinni guzár, but this has certainly not been done for the last four years. A 'trinni guzár' village is one in which the whole of the village cattle pay trinni every year whether they graze in the Bár or not. It is taken for granted that the whole of the cattle graze in the Bár every year. The ghair trinni guzár villages are those who are not attached to any chak. It is assumed that the cattle of these villages never do graze, and they are therefore exempted from payment of trinni. If they are caught grazing they become liable to penal rates. The chakdárs collect from the trinni-paying villages at the rates sanctioned. These chakdárs are the old Sadr trinni guzárs

under another name, and are generally from year to year the same persons, the most influential zemindars residing in the neighbourhood of the chak. The sums for which the various chaks were leased during the first few years after the introduction of the system were based on an estimate thus calculated. The cattle of the trinni guzár villages were enumerated and the income calculated. To this was added the estimated income from the cattle of outsiders grazing in the chak during the year. The total formed the sum more or less modified to suit particular circumstances, for which the chak was let. These estimates were revised annually until a few years past. They were indicative only, not in any way binding. The chakdars are entitled to collect the authorised fees from the living cattle only, existing in the village. The collections may be above or below the estimate in the case of any given village, but the chakdár has no right to collect anything in excess of the fixed fees. The income from cattle not attached to the chak is made up of charges on cattle belonging to villages attached to other chaks, cattle belonging to other districts, and the cattle belonging to nomad tribes dwelling if possible all the year round in the Bár. The scale of fees was revised in 1875 by Mr. Tolbort, and fixed as below :—

Rs. A. P.			Rs. A. P.		
Camels...	{ male	... 0 12 0	Cows	... 0 6 0	
	{ female	... 1 2 0	Sheep and goats	... 0 0 9	
Buffaloes	{ male	... 0 6 0	Oxen	... 0 3 0	
	{ female	... 0 12 0	Horses	... 0 6 0	
Donkeys and mules			Rs. 0 3 0		

To allow for the very inferior character of the pasturage, the rates for the Vichand chak were half these. Bullocks, male buffaloes, horses, donkeys and mules of trinni guzár villages *grazing in their own chak* are exempt. Sheep and goats not 6 months old on 1st April and other cattle not 18 months old, are exempt for the ensuing financial year.

217. The weak point in the system is that it is compulsory, and it is doubtful whether the compulsion is legitimate. Mr. Roe, Settlement Officer of Máltán, has come to the same conclusion. If villages are really allowed from year to year to choose whether they will be trinni-paying or non-trinni paying, the present system must break down. If changes are thought desirable, I trust that the case for direct management may be given full consideration. I am inclined to believe that the system of direct collection through Sadr trinni guzárs was the best. It was condemned because it allowed so many opportunities for fraud and corruption. In other words it was not looked after. It suffers from the same chronic disease as the Revenue system generally, want of attention. All our systems are condemned unless so devised as to work of themselves. The ideal is a machine that once set in motion will go on for ever turning out revenue with relentless regularity. If we look closely into the present chak system with its collections through chakdárs aided by tahsil co-operation, the difference between it and the old collections through Sadr trinni guzárs will not appear very considerable. There is less corruption than before ; but is there less oppression? During the present year one of the chaks near the Sadr is being held direct with, I believe, the most profitable results to

Government. The old lessees only offered Rs. 10,000, and it is estimated that the actual collections will amount to Rs. 20,000. The trinni administration deserves far more attention than is usually accorded to it, and that it receives so little attention is simply due to the fact that so much of the district officer's time is taken up in hearing petty civil appeals, that he cannot afford time to thoroughly supervise a tax that brings in an income of Rs. 80,000 a year. The trinni collections for the last 20 years are given below :

YEAR :	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Trinni ...	71,761	71,761	69,606	61,595	64,875	63,791	78,570	72,268	73,894	75,292
Sajji ...	3,835	5,546	6,070	5,550	6,750	14,710	7,073	9,200	15,887	16,747
Múnj ...	88	88	50	53	102	55	300	290	300	300

YEAR :	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Trinni ...	87,628	1,27,343	1,15,636	1,09,958	1,10,887	1,01,193	92,792	79,208	80,017	80,193
Sajji ...	12,586	16,630	11,950	13,850	Included in		Trinni	in 1874-5.		
Múnj ...	290	1,489	968	1,187	550	330	Included in		Trinni	from
							1876-7.			

At first, grazing fees 'trinni,' sajji sales, and múnjkána sales were shown separately.

218. Shortly after the commencement of this Settlement a revision of the rakh demarcation in the ilákás of Garh Máharájá and Ahmadpúr was completed by Mr. Fryer. These two pargannahs until 1861 were included in the Muzaffargarh district. The rakhs were originally demarcated in a summary manner without a full knowledge of the facts and without due regard to the interests of the people, by pencil lines drawn on the maps of the Revenue Survey. In not a few instances, wells and cultivated lands were included in the rakh area, and villages were cut off from their grazing grounds by intervening appropriated jungle. The revision of the rakh boundaries was conducted on the same lines in this district as in Muzaffargarh. The result was that the Government waste land situate in the two pargannahs was cut down to 32,876 acres from 54,857 acres. The rakhs in the two pargannahs are, excluding that of Sadkána Mirali, No. 14 in Mr. Fryer's list, now thirteen in number. It was at first conditioned that the wood growing on the surrendered land should remain the property of Government in absolute and indefeasible right, but after a reconsideration of the facts of the case a recommendation that no such rights should be reserved was accepted by the Government.

219. The release of so much waste to the zemindárs accompanied by the partition of the Dera Ismail Khán Thal between the zemindárs and the Government and its division into villages held in sole proprietary right by individuals, and rakhs the sole property of Government, rendered a change in the trinni arrangements obtaining in this portion of the district imperative. Hitherto the zemindárs of these two ilákás had grazed their cattle in the Leia Thal without being called upon to make any extra payment beyond the trinni paid by them in Jhang. But now that all the Thal belonged either to Government or to villages, to one or other the Jhang grazier would have to pay an extra grazing fee if he pastured his cattle in the Thal. His case was a particularly hard one. He had been excluded from the partition of the Thal, and the grazing in the scattered rakhs was of the poorest description. North of these two ilákás there are no small isolated rakhs in among the villages, but a large slice of the adjacent Thal belongs to the Jhang district. Here a change of system was also needed, though the necessity was less than in the two southern pargannahs. The villages hitherto had been all taxed alike, whether located close under the Thal or far away on the banks of the river. It was a notorious fact that in most of the river villages the cattle hardly ever went to graze in the Thal. Cultivation is dense and the cattle few. It was hardly probable that the few cattle of these small well-cultivated villages would go to the Thal. It could hardly be worth while sending them. To remedy these hardships the Dera Ismail Khán or Shahpur system of trinni has been introduced. The present system of levying trinni has been abolished. Instead an assessment* has been imposed on the waste lands of each village in their grazing capacity. The Government waste lands of the Thal will be leased annually to lessees who will collect grazing fees at a fixed scale from the cattle that graze therein and those only. For the two Thal chaks no separate camel trinni has been imposed. The Government has assented to the proposition of the Settlement Commissioner that no grazing fees should be levied from the cattle of zemindárs grazing in the Ahmadpúr and Garh Máharájá rakhs, but a separate camel trinni will be levied from the camels resident and grazing in the iláká. The right of free grazing in these 13 rakhs has been absolutely surrendered to the zemindárs on account of the extreme poverty of the rakhs as grazing grounds, and to prevent the possibility of these rakhs ever being leased to any outsiders. The zemindárs had at first agreed to take up most of the leases of these rakhs, not because the grazing in them was worth the revenue thus charged, but because circumstanced as they were, they could not allow outsiders to take up the leases. It was not because they wished to send their cattle into the rakhs, but because they could not keep them out. The assessments on the village waste in the villages trans-Jhelam and Jhelam-Chenab amounted to Rs. 2,337, being Rs. 615 below the assessment given by the rate of Rs. 1-12-0 per 100 acres, up to which I originally had hoped to be able to assess.

* Note.—This assessment was originally intended to be fixed, but in many villages the amount was so small that the zemindárs added it to the land revenue and distributed it over the holdings where the village was under a system of fluctuating assessment. This grazing assessment thus also because fluctuating, and the sanction of Government to its being so treated has been obtained.

220. In conclusion I may remark that in answer to a reference from the Settlement Officer's opinion as to further changes. the Financial Commissioner asking for the joint opinion of Mr. Ogilvie, late Deputy Commissioner of Jhang, and myself as to whether any changes were needed in the existing triinni arrangements, I wrote that in my opinion the system introduced into the Sind Saugor Doab portion of the district should be extended to the portion of the Jhang tahsil lying in the Vichand, but that for the remainder of the district, direct management excepted, it would be difficult to improve on the system at present in force.

221. The final kámil assessment on the leased 'darkhwaḍti' wells and plots situate in the Government wastes of the Thal and Bár, amounts to Rs. 6,310 * more or less on * 299 wells or plots. These wells have been sunk at various times since the Regular Settlement, by persons originally crown tenants under leases from Government. At this Settlement, following the orders passed in reference to similar crown tenants in the Montgomery district, certain tenants whose occupancy was found to fulfil the conditions below mentioned, have been invested with full proprietary right in their wells and lands attached. The opinion of the Financial Commissioner on the rights of these crown tenants was thus stated in his No. 144 S. of 12th April 1876: "Mr. Egerton thinks that it must be assumed that the lessees whose tenure is previous to the revised rules of 1868, must have considered that they would acquire proprietary right in the land leased to them and which they cultivated or improved, and the Financial Commissioner accordingly supports the recommendation of the Settlement Commissioner." The proposals were sanctioned by His Honor the Lieutenant Governor, and accordingly all lessees holding on leases granted previously to the issue of the Financial Commissioner's Book Circular VII of 10th March, 1868, have been recorded as full proprietors.

These wells are not found scattered here and there everywhere throughout the Bár and Thal tracts. They are generally located along the edge of the Bár near the village boundaries, and the lessees are usually residents of the nearest village. Those farther away in the interior of the Bár have been constructed more with the object of watering cattle than raising crops. Besides the well lands there are a few plots of baráni cultivation held on leases. The assessment of these wells and plots has been framed on principles different from those on which lands held in private proprietorship have been assessed. In the case of the latter the area under cultivation and the estimated area annually cultivated by a well have been the two bases of the calculation. In assessing these leased wells the area of the grant without reference to the area under cultivation has been the point most considered. The lands are grants from Government. When the lease is given the land is waste and the revenue demand is naturally proportioned to the extent of the grant. Taking two grants equal in area and quality of soil, the original assessments will be equal. If at the expiry of the original leases it is found that the lands of one

* NOTE.—These are the correct figures of Statement E, and differ slightly from those of the Assessment Report statistics.

lease are lying waste and the well out of work, while the other well is doing well and has a large cultivated area attached, this is surely no reason for diminishing the tax in the one case and raising it in the other. To do so is to put a premium on laziness and to tax energy. It is hardly possible not to take into account in fixing the assessments of different wells the larger income derived from his land by the industrious lessee, but his assessment should not be much higher than the assessment given by the rate adopted on the total area; and at the same time the assessment given by this rate should never be remitted because a well has fallen out of work, or materially lowered because the land is badly farmed. In such cases the lease should be cancelled if the lessee cannot cultivate the land. The land belongs to Government, and it is at the outset neither desirable to lease it to a man who cannot farm it properly nor subsequently expedient to exact rent from a lessee who has become unable to keep the well at work, or to farm the land at a profit.

Briefly as long as a lessee elects to maintain the lease he should be shown no favour, but any application made with the object of cancelling the lease should be at once accepted and the rent remitted. Defaulting lessees can be allowed short periods of grace to enable them if possible to meet their engagements, but once it is found that they have become permanently impoverished it is more humane and more politic to at once cancel the lease than to slowly effect the lessee's ruin by rigorously collecting the rent until he himself is forced to apply for cancelment.

The main principles of the assessments,

222. As many of the wells were out of work the assessment was effected on the following principles :—

1st. A minimum jama was calculated for each well on its culturable area, the rate per acre being adjusted to the varying circumstances of each tahsil and circle, according as the wells were bad or good.

2nd. A maximum jama was also calculated for each well under cultivation, based upon an estimate of what area on the average is cultivated from a good well. Here again the tahsil and circle estimates varied in accordance with the quality of the wells. The jama assessed has as far as possible been so pitched as never to be lower than the minimum or higher than the maximum, and oscillates between the extremes in accordance with the agricultural conditions of each well.

To these general rules exceptions naturally occurred, but they are extremely few.

Assessment statistics,

223. The assessment statistics for each tahsil are given below :—

	WELLS.	TOTAL AREA.	CULTURABLE.	CHAHI.	BARANI.	FALLOW.	TOTAL MALGUZARI AREA.
Chiniot ...	88	5,419	2,882	1,474	284	548	5,188
Jhang ...	156	7,245	4,262	2,204	12	554	7,032
Shorkot ...	46	2,169	1,577	388	3	128	2,096
District ...	290	14,833	8,721	4,066	299	1,230	14,316

The revenue rates adopted are these :—

TAHSIL.	TRACT.	MINIMUM PER ACRE.	AVERAGE PER WELL.	MAXIMUM PER WELL.
		Annas.	Rs.	Rs.
Chiniot	{ Sándal and Kerána Bár } ...	8	25	30
Jhang	{ Sándal Bár ... Vichand Bár ...	6 8	17 25	20 30
Shorkot	{ Sándal Bár ... Thal	6 5	17 16	20 20

The resultant jamas are subjoined :—

	MINIMUM.	AVERAGE.	MAXIMUM.	PRESENT.	PROPOSED.
	Rs.	Rs.	Rs.	Rs.	Rs.
Chiniot	2,200	2,593	2,640	1,454	2,450
Jhang	2,310	2,768	3,320	2,016	2,903
Shorkot	773	752	920	603	800
District	5,783	6,113	6,880	4,073	6,153

In addition to the jamas thus framed, the lessees of all wells have been charged one anna in the rupee as malikáná. From this payment the proprietors of wells leased before 1868 are exempt. Cesses are charged as on ordinary land revenue.

224. Year by year a certain amount of revenue is realised from the lease of lands in the Bár for rain cultivation. The assessment rates charged are :—tobacco, Re. 1-8-0 ; til, cotton, wheat, tárá mirá, barley, gram, Re. 1-4-0 ; bájrá, múng-másh, chiná, moth, jowár, khúrбуза, turnips, Re. 1. Collections from 1860 to 1879 are given below :—

YEAR :	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869
Collections	401	109	2,024	4,043	647	522	698	2,419	1,154	3,160

Year ...	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879
Collections	2,626	1,361	6,888	4,188	3,870	3,181	2,579	1,762	8,761	4,906

Applications are made on stamped paper specifying the amount of land and the crop or crops that it is intended to cultivate. The Tahsildar gives permission, and this is subsequently ratified by the Deputy Commissioner. Later on the area under crop or that has been sown is measured up and the rent is collected in accordance with the above rates from the lessee. The chief crops grown are *bájrâ*, *jowâr*, *til*, *moth*, *múng-másh*, *gram* and *wheat*. *Kharif* crops predominate. In favourable years splendid *bájrâ* and *moth* or *mung* crops are grown. *Bájrâ* crops in the *Kerána Bár* are better than elsewhere. This *Bár* is supposed to be generally more favourable for the production of rain crops than the *Sándal Bár*. There is no doubt that the rain cultivation in the *Bár* has materially interfered with the prosperity of the *Utár* villages on both sides of the river. The tenant of an *Utár* well is generally more of a herdsman than an agriculturist, and there is nothing he likes better than some ten acres of *baráni* cultivation surrounded with good pasturage and a pool of water near. With his family and cattle he leaves the well, constructs a rough shed and lives under it in the *Bár*, or as often as not has no cover except a *pilú* bush. The seed once sown he has nothing to do but to trust in Providence : there is no watering or weeding to be done ; and there is little that the fatalist zemindar loves better. Camels, horses and even human beings are yoked to the plough when the early rains are peculiarly favourable, such is the anxiety to get as much seed into the ground as possible where there is a certainty of its germination. I think a certain amount of care ought to be exercised in granting these leases. It is a well known fact that one of the causes that led to the great deterioration of *Mauza Lálíán* and the reduction of its *jama* from Rs. 2,250 to Rs. 1,500 was the desertion of the wells by tenants who went off to the *baráni* cultivation of the *Bár*. The same remarks apply to the leasing of lands for 20 years or more for the construction of a well. The circumstances of the applicant should always be closely enquired into. It should be ascertained whether he has sufficient means, whether he has waste land of his own that might be cultivated, whether existing rights are injured, where the land applied for is actually situated. If all these questions are satisfactorily answered, the land may be granted at the rate of 50 acres for a single and 100 acres for a double well. The rates per acre might be those used in the present assessments. An *anna* in the *rupee* should be charged as *malikáná*. For the first two or three years no rent should be charged. The construction of a well in the *Bár* is an expensive matter. Lastly, no leases should, during the next ten years, be given for a period longer than the present Settlement.

CHAPTER IX.

THE RECORD OF RIGHTS.

225. In this chapter an endeavour will be made to explain clearly, 1st, Preliminary. The papers contained in the Record of Rights, the nature of the papers that make up the Record of Rights or '*Misl Bandobast*,' and, 2nd, the manner and mode of preparation.

The contents of the Settlement Record are as follows, in order:—

1. The title page, on which a list of the papers contained in the volume is given.
2. The index to the contents.
3. The Khasra or field register.
4. The field map.
5. The genealogical table and statement of proprietary tenure.
6. The engagement for the revenue.
7. An alphabetical list of proprietors and hereditary tenants.
8. An alphabetical list of all wells.
9. The register of rights and liabilities—Khewat Khatauni.
10. The list of land revenue assignments.
11. The Administration paper—Wājib-ul-arz.
12. The final proceeding.—Rubkār ākhīr.

226. The index is not, I think, a very useful paper, except as a means of checking the contents and entries, and may be passed by without further notice.

The Index.

227. The Khasra is the list of fields, and gives the proprietors and occupants of each field with the area, class of soil, and crop.

The Khasra or field register. The name of the well estate to which the field belongs, the trees situate on boundaries between separate proprietors, and the number of the holding, Khāta, of the Khewat Khatauni, in which the field is included, are also entered. It is the index connecting the field map and the register of holdings. Where a village is made up of well estates the fields of each estate are entered in unbroken consecution. Thus the fields of the well first measured will be from 1 to 50, and of the well next measured from 50 to 100. The areas on each page of the Khasra are totalled and of each well. At the end of the Khasra an abstract area statement will be found giving the fullest details of cultivated, fallow, and uncultivated lands. The culturable waste is detailed into *sailāba* culturable waste, and other. This was useful for assessment purposes in riverain villages.

228. The field map will best speak for itself. Cultivation, fallow, and waste are shown in different colours. Waste that is saline or covered with scrub jungle and grass or with *sar* grass, has in each case been differently delineated. The boundaries of each well estate are shown. In other respects the maps have been prepared in the ordinary way. The scale on which the maps have been plotted is 60 *karrams* to the inch, or 16 inches to the *miie*. A *karram* is 5½ feet long. A *merla* is 9 square *karrams*. Twenty *merlas* go to the *kandl*, and eight *kandls* to the *ghumdo* or acre, which is exactly equal to the English acre.

The field map.

229. The statement of proprietary tenure with pedigree tables, Shajra Nasab, of each tribe and family, is the most useful of all the papers contained in the Record of Rights.

The Shajra Nasab.

The pedigree tables are preceded by a brief history of the acquisition of proprietary right in the village by the present proprietary tribes and families, and a note explaining how the village came to be called by its present name. There is also a brief account of the revenue assessments up to the present Settlement. The pedigree tables are arranged in the order in which proprietorship in the village was acquired by each family, and after them come the *shámilat deh* holdings and any land held by Government, such as roads, &c. Underneath the name of each proprietor are shown in tabular form, the names of wells or *sailáb pattis* in which he holds property, the number of the Khewat holding, the share in the holding, the area of the holding, entire or fractional, and the assessment payable. At the foot of the page a brief account *kaiḥiyat khándán*, of the acquisition of the property now held by each family is recorded. Where one member or branch holds more or less property than what he or it would be entitled in accordance with ancestral shares, where partition has taken place or where any other features of the tenure call for notice, brief explanations have been given in the account. The *kaiḥiyat khándán* is to the family and its property what the *kaiḥiyat deh* is to the village proprietary and the village. In spite of constant orders, directions, censures and entreaties, I never got these explanatory notes as I wanted them. Either the Munserim lost himself in details or he wrote down self-evident facts in the baldest language. Often, however, they will be useful to Judicial officers. The area held in proprietary right and the amount of revenue paid by each family are totalled at the end of each pedigree table. These totals are extremely useful in many ways. Besides the *kaiḥiyat khándán*, various notes regarding the guardianship of minors, the possession of absentees' property, widows' rights, &c., have been recorded under the name of the person referred to. It has been the rule throughout this Settlement to avoid all definition of absentees' rights. If the absentee's name appeared in the last annual papers, unless sufficient reasons for striking it out were produced, it has been retained in the new record, and the name of those in possession entered below in the proprietary column. Different colours and markings indicate persons who are minors, absentees, lambardárs, dead without heirs, disinherited, &c.

230. The tender of engagement deserves mention, because three forms The tender of engagement will be found in the District records. The first is the ment. one taken from the lambardárs of villages under a fixed assessment, and is in the form prescribed by the rules under the Land Revenue Act. The second is the form of engagement taken from the lambardárs of villages under a system of assessment fluctuating on the wells in work. This embodies the system sanctioned by the Punjab Government for the Bár and Kachí tracts. The tender engages for the revenue on the following stated terms :—

1st. That the jama announced has been fixed for the wells recorded in the record as at work at measurements; and that each of these wells will pay the amount allotted to it by the *bách* so long as it continues to work.

2nd. That the lump assessment per well on new wells will be so much, that old wells repaired will be revenue free for two harvests, and new wells for

six; that the assessment will commence from the third and seventh harvest; that when the assessment has been once imposed on a new well it will be collected as long as the well remains at work.

3rd. That a well will be deemed to be at work for assessment purposes if any land, however little or however great, is irrigated and cultivated therefrom; that the cultivated area will not be measured up annually; and that the assessment imposed on the well will not vary with the amount of cultivation.

4th. That the assessment of any well falling out of work will be remitted from the first harvest for which no land is irrigated and cultivated from the well.

5th. That any well previously assessed, the assessment of which has been remitted under clause 4, will, if again brought into work, be assessed at the old rate from the first harvest, provided that in all cases a new well or old well repaired shall not be assessed until the full number of harvests for which it is revenue free shall be complete.

6th. That if land outside the estate attached to an assessed well is irrigated therefrom, neither the assessment of the well will be raised nor any assessment imposed on the land outside.

7th. That a second well, if constructed in a well estate within which a well is already at work, will be assessed under Section 2, and for assessment purposes there will be two wells in the estate.

With reference to the last clause a few remarks are necessary. Under the orders any well that falls out of work will get a remission. Therefore if an old well falls out of work and a new well is constructed in the same estate, the old well's assessment will be remitted and the new well assessed under section 2. If both wells are worked, the land tax will be collected from both; if only one, the assessment of that one. Many well estates are large enough for two wells and to have imposed no assessment on a new well constructed in an estate in addition to the old well, would have resulted in needless loss to Government. From the other point of view the Government will often lose from the construction of a new well in the place of an old one, as it will be assessed at a lower rate. The essence of the system, however, is that the well and not the land is the assessed unit, and to have devised any rule militating against this fundamental principle would have been unadvisable. The construction of a new well is expensive and it is only fair that the constructor should hold the well revenue free for the first few years, according to the terms of the system.

The third form of engagement is that tendered by riverain villages under fluctuating assessments. These differ more or less in each case. My endeavour in drafting the forms was to leave no room for the least doubt on any point. Patwáris and Kánúngos are wonderfully clever at going wrong if they are given the slightest chance.

231. On the title page of the Khewat the manner in which the jama has been distributed has been briefly recorded. The register of rights and liabilities or Khewat Khatouni. Khewat has been framed on the following rules. First of all come the wells arranged in the order in which they were measured. After them come plots of land not included in

any well estate, but watered from an adjacent well. Next come the *sailáb pattis*, and last of all the *shámilát deh*, or unattached waste, and land belonging to Government. In the case of a well that is at work, the entries are made thus. First comes in one line the name of the well, the number of the *kháta* in which the field containing the well is entered, a note whether the well is at work or out of work, brick work or not, single wheeled or double wheeled. Below is recorded the depth to water and to the bottom of the well, the number of yokes required, and the number actually working on the well. Next comes the *Kaifiyat cháh*, or account of the well, which contains the history of proprietary right in the well, the method of working the well, and the mode of dividing the water, a note whether the well is divided or not, and if so how, and the mode of distributing the revenue. The history of proprietary right ought to be a terse, concise, and clear statement of when the well was built and at whose expense, who were the original proprietors, and how the present proprietors succeeded to their property and their shares therein. I believe these accounts to be fairly accurate. Below the *Kaifiyat cháh* come the ordinary entries of rights and liabilities. All mortgages are shown briefly in the proprietorship column, and the conditions of the mortgage are abstracted opposite the entries in the revenue column. In many cases the mortgage deed had been lost, and existing conditions were then noted. It was also found that many arrangements existed between the parties that had not been specified in the deeds, and where there was no dispute these have been invariably entered. If the mortgagor made claims that the mortgagee would not admit, and there was any doubt as to practice, no entries have been made either way. All other points bearing upon the payment of revenue or the taking of the produce deserving mention, have been noted in the remarks column. Where tenants are in receipt of *taccavi* advances the amount has been recorded, and the name of the creditor. The area of each tenant's and each proprietary holding is totalled, and also that of the whole village.

232. The *Wájib-ul-arz*, or administration paper, consists of 43 questions and answers, modelled on the instructions contained in the *Administration papers*, or *Wájib-ul-arz*, the rules under the Land Revenue Act, but modified where necessary, to suit the circumstances of this district. There are a few of the clauses that call for remarks.

Clause 10. This clause in villages under a fluctuating well assessment, provides for the assessment of rain lands cultivated outside well limits and the division of the income between the proprietors of wells at work according to the quota of revenue paid by each or not, as the case may be. It also determines the responsibility for the revenue where a few out of many co-sharers sink a new well or repair an old one, and defines their right to cultivate the lands of the others. The sharers who have brought the well into work are primarily responsible for the whole *jama*, and they may usually cultivate all the land attached to the well. If any shareholder objects to their cultivating his land they will not be entitled to do so, but the objecting co-sharer will have to pay his full share of the *jama* calculated on his share of the land. Any sharer who at first declined to take a part in the construction or repair of the well may at any subsequent time after payment of his share in the

expenses and after the spring or autumn harvest has been cut, take possession of his land or share. These conditions were suggested by me, and the ~~seminars~~ ^{seminars} were asked their opinion when the assessments were distributed. They were gladly agreed to, are fully understood, and are in accordance with local usage.

14. Generally speaking, the possession of any Khewatdár who cultivates *shámilat deh* cannot be disturbed, except at partition of the holding, and even then only to the extent that he cultivates more than his share. He pays the revenue and takes the produce. In many villages wells situate in the *shámilat deh* had been held for many years by the Khewatdárs who first constructed them. In some few cases these wells have been recorded as the property of the *ábádkárs* after a separate enquiry on which the Settlement Officer's order ought always to be found. In other cases the land is entered as *shámilat deh* in the proprietary column, and below the names of the parties in possession are given. The well statement gives all the facts of importance connected with the construction of the well. The clause also defines the rights of persons who have been declared proprietors of wells sunk by them in the *shámilat deh* with regard to the unoccupied waste at partition.

17. With one exception, where a judicial decision had been previously passed, the boundaries of opposite villages in the intermediate river bed have been demarcated at this Settlement, and the river measured and mapped.

Most of this demarcation had been completed before I took charge. The main principles on which the boundaries were fixed were these. The boundaries of the adjacent villages were first mapped according to the Revenue Survey of 1855, and the Regular Settlement field maps. There was generally not very much difference between the boundaries shown in these two surveys. Then on the same map all land that had since accreted and been occupied and held by either village as proprietor was plotted. Land once so held was allotted to the occupying village. If any land still remained on which it was clear that nobody had been in possession, it was generally divided between the two villages, though if one village had since last Settlement acquired a large slice of the river bed, while the other had lost by diluvion, the major portion of the hitherto unappropriated land might be awarded to the latter. Although this has been done I do not suppose that when land actually accretes in places where land has never within memory existed, the present demarcation between villages will be accepted without question. Within the village boundary there is one rule for the whole of the district. As far as I know there are no exceptions. If land held now or formerly in proprietary right, decretes or has decreted, and subsequently land accretes on the site of such land, it will be the property of the proprietors whose land formerly occupied that site. As to newly accreted land in regard to which no old proprietary right can be proved, I venture no opinion. Whenever such a case comes up it must be decided on its merits, if there is no provision for it in the *Wájib-ul-arz*.

Clauses 30 and 32 give the requisite information about *sajji* : who are the lessees, what the lease money is, and what rights of grazing are possessed by the village cattle and others on the *sajji*.

Section 33. A great deal of ill-feeling arose in connection with this clause, concerning the village site. The Hindús and other residents claimed full proprietary right in their habitations and the ground occupied. The zamindars, the proprietors of the soil, asserted that the Hindús and other residents had only a right of occupancy without any power of transfer or of carrying away the materials. As a rule the entries of last Settlement's Wájib-ul-arz have been maintained. Rights of this description cannot be defined in a Wájib-ul-arz, and can only be properly enquired into and decided by a Civil Court. In the case of Kot Shákir, tahsil Jhang, I have given my opinion at length on these cases. I hold that Kamíns, tenants-at-will, and other poor classes have nothing beyond an occupancy right. This right is never questioned. To define the rights of well-to-do shopkeepers who live in pakka houses is a more difficult question.

Clause 41. In most cases the zamindárs have admitted that where land held by an occupancy tenant decretes and subsequently accretes, the rights of occupancy survive just as proprietary rights do.

After the Wájib-ul-arz a statement has been inserted in which the heading of each section of the Wájib-ul-arz of last Settlement is given in one column, and in the next it is noted where entries corresponding to those of the particular section of the old Wájib-ul-arz are to be found in the new Wájib-ul-arz or Settlement record, or if they have not been included, the reason why.

233. Last paper of all is the final proceeding. The most important portion of this paper is the detailed list of cases and decisions affecting the village, with a note opposite each, stating whether effect has been given to the order in the entries of the present record or not.

234. For each village a *thákbast* file has been prepared. The *thákbast* map shows the village boundaries, the principal roads, and any other marked features of the village, any differences between the present boundary and that of the Revenue Survey of 1855, have been shown and orders passed upon them. The boundaries of villages adjoining the Bár have been fixed in accordance with the Revenue Survey maps, unless there was good reason for an alteration. The grounds for such alteration will always be found in the orders passed.

235. When the measurements were complete and the preliminary statements of holdings prepared, the attestation commenced. The standing order was that the Patwari should attest each holding at the village, that he should first show the proprietors the boundaries of the land, according to the village map on the spot, and then take their depositions as to their rights in the soil. I believe these instructions have been generally carried out. Then came the attestation of the Munserim and the Deputy Superintendent at the village, and, lastly, that of the Superintendent, which if not at the village itself, was always effected at some village near. A great deal of extra work was imposed on the Superintendent in the first days of attestation by their attesting all

changes of entry from those in the last annual papers whether undisputed or disputed. Latterly the Deputy Superintendent's attestation alone was deemed sufficient authority for making changes in regard to which there was no dispute. Wherever the entries of the present record have, as compared with the last annual paper's entries, effected a mutation of names in whole or in part, an order directing the mutation will be found in the *Fard badr* (list of correction) papers, all of which have been roughly bound and filed in the District office. There are two kinds of mutations, one consequent on partition entered in the '*fard badr taksim*,' the other resulting from any other cause '*fard badr dákhlil khárij*. Where the correctness of the entries in the annual papers was contested but the final order directed that they should be maintained, the preliminary statement of holdings, '*chitta tasdiq*,' on which all the attestation is done, has also been filed. The files of enquiry into the rights of tenants and háthrakháidárs, have also been filed, and in the case of each tenant recorded as hereditary the number of the file will be found given in the Khewat. The attestation of the Wájib-ul-arz was effected by the Superintendent alone. None of the other Settlement officials had anything to do with it. The attestation file of this paper also has been filed. The District record-keeper has been carefully instructed in the matter of these papers, and thoroughly understands the principle and system on which they have been filed.

236. The distribution of the village jamas on wells has been a very difficult piece of work in this district. There have been an enormous number of appeals from the orders of the Superintendents and many on very just grounds. There was not the least difficulty in distributing the jama on sailáb lands. There are several ways of distributing jama over wells, one by an average rate whether on cultivation only or on cultivation and fallow, or on the total area. The jamas given by the average rate may then be modified by lowering the jamas on wells that appear to be too heavily assessed, and raising them on those that have escaped too lightly. The other way is to group the wells into classes and fix a lump sum rate for each class. In many cases the zemindars after consulting among themselves distributed the jama in lump sums over the wells, according to their quality. Of all the modes the last is the best if the distribution is done honestly by the zemindárs. No Settlement official can make such a distribution. The second and first modes are about equally good, but the greater care has to be exercised throughout, and unless the distributing officer has some personal knowledge of the village, he cannot check the results of the rates or the gradings. Then wells differ greatly in quality from year to year. The owner of a well that was doing badly at measurements and on which the assessment by rates is only Rs. 12, naturally fails to appreciate the justice of a lump sum of assessment of Rs. 24, because the well is now in as prosperous a condition as any in the village. Conversely if the assessment is made by a rate, the owner of a well that was fully cultivated at Settlement, strongly objects when he finds that his assessment is much higher than that on wells which are at the time of distribution equally well off. To discriminate between objections of this nature and to give a fair assessment to each well requires great patience, considerable tact in question-

ing the zemindars as to the capabilities of each well, and a certain amount of acquaintance with the relative qualities of the different wells. I distributed the jama of Jhang, and I did not finish it until after four days of very hard work. I cannot congratulate any of the Superintendents on their distribution work. They were all afraid of putting a relatively heavy jama on the best wells. The record of the distribution has without exception been filed for every village. In the internal distribution of a well's jama where the land attached has been divided, the basis has sometimes been the area cultivated and sometimes the shares in the water. In the case of wells under a fluctuating system of assessment, my orders were that in all cases of dispute the assessment was to be divided on the water shares. This naturally follows where the assessment unit is the well, not the acre.

237. The comparison and checking of the máfi areas of this Settlement with those of last Settlement and of the original file of enquiry and the assessment of each grant for the levy of cesses was effected by myself and has been thoroughly done. The old files were inspected in almost every case, and the excess areas passed or struck off in accordance with the instructions of Government. It was only necessary to report, I think, two cases.

238. Zaildárs were appointed by Mr. Fryer before I took over charge. Tahsil maps showing the boundaries of each zail have been prepared and made over direct to the Deputy Commissioner, as they are urgently required by him in connection with the coming census. There are 21 zaildárs in Chiniot, 25 in Jhang, 17 in Shorkot. The file of correspondence has been made over to the District, together with the volume containing Mr. Fryer's original orders. Ináms have been proposed for the zaildárs in addition to their allowance of 1 rupee per cent on the revenue. Orders have* not yet been received. The zaildárs particularly dislike having to collect their allowance from the lambardárs, and I think there is a great deal to be said against the standing order and very little for it. It will result in endless bickerings, many civil suits, and a great deal of ill-feeling. In many cases the zaildár will forego his rights sooner than ask a friend for the money. On the other hand I am unable to see what objection there can be to collection and payment through the tahsíl.

239. The great increase of revenue in many villages rendered a readjustment of the patwáris' circles unavoidable. This work was done under my immediate supervision. The objects kept in view were to retain to the patwári as many of the villages of his old circle as possible, to maintain an average rate of remuneration throughout, to include villages owned by one family or one tribe as far as possible in the same circle, to give each patwári a fair share of upland and river work, and to leave the circles compact in boundary. Náibs have also been appointed. I trust that some amendments of the rules relating to the appointment of Patwáris will result from the enquiry lately instituted by the Financial Commissioner. The evils of the present rules if they were carried out to the letter are many and great. If, as is possible under my plan, every patwári

* NOTE.—Since this was written all the ináms proposed have been sanctioned.

has to serve some years as a naib, the anomaly of appointing to a vacant patwāri-ship a man or boy who knows nothing whatever about his work, because there is a relation of the late patwāri, and is supposed to have an hereditary affinity for the work, will be avoided. All vacant patwāri-ships should be filled up from the naibs, and the best naib in the tahsil should be appointed without any regard to his length of service. The vacant naibship should be given to the patwāri's son or relation who wishes for it, if the hereditary preference is to be kept. I should much prefer restricting the appointment to young men who have passed the middle school examination, and are under 25 years of age. There would be no lack of applications. Four of the Naibs now appointed have passed this test, and sharper, more intelligent workmen I could not wish for. The table below gives the patwāri statistics for each tahsil :

TAHSIL.	Number of villages.	TAHSIL STATISTICS.			NUMBER OF PATWARIS.		CIRCLE PAY.		
		Khasra num-bers.	Hold-ings.	Jama according to state-ment G.	Patwaris.	Naibs.	Highest.	Lowest.	Average.
				Rs.			Rs. A. P.	Rs. A. P.	Rs. A. P.
Chiniot ...	265	304,112	27,177	97,299	35	5	16 8 0	9 0 0	12 1 0
Jhang ...	358	503,861	39,453	1,55,199	58	8	17 12 0	9 3 0	11 10 0
Shorkot ...	189	210,067	19,844	1,12,292	41	6	16 8 0	9 0 0	12 1 0
District ...	812	1,018,040	86,474	3,64,790	134	19	...	...	11 4 0

240. In granting protective pattahs, and a considerable number were taken out in Chiniot, where the well is out of reach of river floods, half the assessment given by the *bāch* has been remitted. Where the well is assisted by sailāb the difference between the sailab and the *chāhi-sailāb* rate has been remitted for the period for which protection has been granted. This procedure is in accordance with the latest orders on the subject.

241. I wish to make a few remarks before concluding this report, on Alluvion and diluvion the extremely unjust and unfair mode on which new assessments. river lands were being assessed in this District when I took over charge of this Settlement. Lands that were neither fit for grazing nor for cultivation used to be assessed at the *mālgūzāri* rate of assessment, i. e. at the rate at which the jama of the village fell at the last Settlement on the *mālgūzāri* area. The consequence was that rates for culturable land of exactly the same description varied from as much as 12 annas to 6 pies in different villages. Some of the villages whose new waste was assessed at this high rate, have been permanently injured. I most strongly recommend that for the future all new *cultivation* liable to assessment in riverain villages be assessed at the rate sanctioned for the assessment circle, viz., Re. 1 for the Jhelam and lower Chenab, and 15 annas for the upper Chenab in the Jhang tahsil. For Chiniot I would raise the rate from 12 annas to 14 annas.

There is no reason for maintaining the rate as low as 12 anas. I have also to strongly urge the bad policy of assessing new waste lands at all until they are cultivated. It is of the utmost importance that the jungle on these lands should not be cut down and the soil broken up. So long as grass or *pilchi* is growing it acts as a sieve to catch silt from the flood water as it passes over. Destroy the jungle and, except in abnormal cases, no silt is deposited. The assessment of land in its waste state makes the zemindars break it up much sooner than they otherwise would, and the quality of the land is thereby much injured. An assessment on waste of good quality and kept simply for pasturage is of course legitimate, but I would not allow any such assessment to be imposed without the express sanction of the Deputy Commissioner. Patwáris are not to be trusted. They are always on the look out for some means of increasing their pay. Tahsildárs frequently know but little of the intricacies of revenue and assessment work, and do what the patwáris say is correct.

242. Before making out my village jamas for the tracts subject to alluvion and diluvion, a girdáwári was made to The Girdawári. ascertain what land each village had lost by diluvion, or gained by alluvion and new cultivation. This girdáwári was carried out in the cold weather of 1878-9, and took up some three months. The results of the girdáwári of each village have been embodied in a Khasra and Khewat, with an abstract statement of gains and losses at the end. The rough copy is with the patwári, and the faired copy has been bound and filed in the district office. A note has been made in the Khewat of the Settlement record opposite each holding where the jama of the holding has been increased or decreased in accordance with the result of the girdáwári, and the number of the Kháta of the girdáwári khewat recording the result has been given. I do not think the patwáris can make any mistake in future alluvion and diluvion investigations, as to what land is assessed and what not.

243. In Chiniot, with the exception of a few villages in the Halkiwáh circle, the instalments of the revenue are $\frac{2}{3}$ rabi and Instalments. $\frac{1}{3}$ kharif. Half the rabi demand is payable on the 15th June and half on the 15th July. The whole of the kharif instalment is paid on the 1st January. In Jhang and Shorkot the same ratio between the amounts of revenue payable at each harvest has been retained, and the rabi instalments fall due on the same dates as in Chiniot, but the kharif demand is payable half on the 15th December and half on 15th January. I do not think there was any great necessity for dividing the kharif demand, but the people desired it, and I saw no harm in acceding to their wishes.

244. No entries have been made in the Wájib-ul-arz regarding dharat. Dharat. I reported on the custom of levying dharat fees in my number 103 of 17th July, 1879. The fees are unimportant and not generally levied. There are various rates, viz., an *ad valorem* duty of one pie in the rupee, $\frac{1}{4}$ seer per maund on the bulk, Re. 1 to 4 anas per cent on the value. In only two villages are contracts given out. The

income is either taken by the town or village chowdhris and spent in charity, or by the lambardárs and used to supplement the *malba* which does not, as a rule, equal the expenses incurred by lambardárs. Enquiries showed that these dues were collected in 95 villages.

245. The Riwáj-i-ám has been separately prepared. Only one statement of questions and answers has been prepared for the whole district. There was no diversity in the local custom to render a separate paper for each tahsil at all necessary. It has been prepared under the superintendence of the Extra Assistant Settlement officer. Too much importance must not be attached to the entries and they are not evidence. Its entries have not the force of the entries in the Settlement record. I think, however, that Judicial officers will find it useful as an index to the general customs of the district. All speculative provisions have been excluded. Where I differ from the answers I have endorsed remarks on the Riwáj-i-ám itself. The matters treated in it are the usual ones of inheritance, gifts, adoption, wills, marriage, &c.

246. Although Malla Singh left Dera Gházi Khán and arrived in Jhang in July 1874, and other Superintendents shortly after, yet there was no real work done until 1875 had commenced. The business returns for the quarter ending 31st December, 1874, show three villages only as measured, 1 in Jhang and 2 in Shorkot. By the end of 1875, the Máchiwál measurements were reported complete. There were 171 villages in the three other purgannahs unfinished. According to subsequent business returns, Shorkot was finished by the end of March and Jhang and Chiniot by the end of June 1876. Measurements therefore took eighteen months. The subsequent stages of attestation and fairing cannot be dissociated. Attestation is not finished until not a single holding remains unattested, and how difficult it is to get Superintendents to *finish* work every Settlement Officer knows to his cost. The remaining stages of Settlement have taken four years and two months. This is an excessive time. I lost most time over the fairing, and the loss was solely due to my inexperience. Processes were performed twice and thrice over that were not in the least necessary nor was the work in the least improved. The enormous quantity of alluvion and diluvion work and the girdáwari took up a good deal of time, but this does not affect the question. Time was certainly lost during fairing. The Settlement was finished, and all the records had been filed by the end of August. The few records that were not in the hands of the record keeper were ready but were not sent in for some special reason. The late receipt of sanction to the assessments threw a great deal of work on the establishments at the last. Since my return from Dera Ismail Khán in April, every superior officer and the patwáris have had their hands rather too full of work. Quarterly reports on progress and business done are submitted in such detail that it is unnecessary to make any further remarks.

247. The cost of the Jhang Settlement, defrayed from Imperial revenue, amounts to Rs. 4½ lakhs, or Rs. 4,31,917-3-7, made up of the following items :—

	Rs.	A.	P.
Salaries &c., gazetted officers	1,10,850	5	8
Travelling allowance do	5,863	9	6
Office establishment	1,20,831	4	6
Measuring do	1,21,396	11	4
Travelling allowance establishment	9,650	13	0
Contingencies	23,213	6	6
Service labels	460	6	0
Stationery	11,326	7	3
Process serving establishment	12,932	0	3
Measuring implements	1,200	0	0
Hutting	1,000	0	0
Office Rent	5,150	0	0
Lithography	7,087	3	7
Repairs to buildings	655	0	0

The income and expenditure from Settlement fees and miscellaneous sources is given below :—

DETAILS.	RECEIVED.			EXPENDED.			BALANCE.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Mutation fees	1,078	0	6	665	4	0	422	12	6
Partition fees	152	1	0	2	8	0	149	9	0
Mafi fees	30	12	0	...	...	...	30	12	0
Parcha fees	4,437	5	2	4,437	5	2	...	...	...
Advance from Parcha fees	31,103	10	7	31,075	0	4	28	10	3
Patwari pay	65,124	13	8	65,124	13	8	...	...	...
Total	1,01,926	10	11	1,01,294	15	2	631	11	9
Patwari contingencies	8,716	0	7	8,642	14	11	73	1	8
Fines	870	6	7	847	6	7	23	0	0
Miscellaneous	24,663	14	11	24,241	10	7	422	4	4
Total	34,250	6	1	33,732	0	1	518	6	0
Grand Total	1,36,177	1	0	1,35,026	15	3	1,150	1	9

A balance of Rs. 8,398-10-1 is included in the expenditure from *pat-wáris'* pay that was made over to Deputy Commissioner Jhang. The miscellaneous income and expenditure includes copying and petition-writing fees, deposit items, &c. The *parcha* fees collections up to the end of March 1878, were shown in the business returns thus :—

FEES.	COLLECTIONS.			EXPENDED.			PAID INTO TREASURY.			BALANCE.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
6 pies	3,737	1	3	3,735	13	3	1	4	0	...	...	...
8 annas	14,461	14	9	701	8	0	10,078	6	0	3,682	0	9
Total	18,199	0	0	4,437	5	3	10,079	10	0	3,682	0	9

A subsequent scrutiny of the *parcha* fees account has shown that the above figures are slightly inaccurate. The return should have been given thus :—

FEES.	COLLECTIONS.			EXPENDED.			PAID INTO TREASURY.			BALANCE.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
5 pies	3,737	1	3	3,697	9	3	39	8	0	...	...	...
8 annas	14,461	14	9	701	8	0	10,078	6	0	3,682	0	9
Total	18,199	0	0	4,399	1	3	10,117	14	0	3,682	0	9

The subsequent collections on account of 8 annas fees credited in the Settlement accounts and debited as paid into Treasury, amount to Rs. 9,587-12-10, of which Rs. 1,707-3-6 were collected by *Tahsildárs* and erroneously credited to the Settlement fund. The total amount of both fees collected by Settlement officials and paid into Treasury amounts therefore to Rs. 21,680-8-1, viz., 8 annas, Rs. 21,641-0-1 ; 6 pies, Rs. 39-8-0. The amount made over for collection to the Deputy Commissioner Jhang was Rs. 9,097-10-2. The total credit to Government therefore should be Rs. 30,778-2-3.

248. *Gopál Dás* was the Extra Assistant Settlement Officer at the commencement of Settlement operations. He was succeeded by *M. Abdúl Ghaní* in the early part of 1876. *M. Abdúl Ghaní* has been of the utmost service to me in the general administration of the Settlement. He was specially useful in checking the work of the different *tahsíl* establishments, and in scrutinizing the monthly and latterly weekly returns of progress made. All the assessment work up to the announcement of the *jamás* I have from the first kept in my own hands. As an organiser of Settlement operations *M. Abdúl Ghaní* has given great satisfaction, and he has a thorough knowledge of the work in all its branches. Of the

Superintendents I am not able to speak well. The first Superintendent of Shorkot, Nazar Mahomed, left the Settlement in the end of 1878, not with honor. Alif Din, the Superintendent of Chiniot, has of late not justified the high opinion I once held of his ability and integrity. Among the Deputy Superintendents Rattan Chand has done extremely good work, and after him I think Hoshnák Rái, an Extra Deputy Superintendent, is the best man in the Department. Charrat Singh has been useful. Jamiyat Singh, my Serishtadar, has given me the fullest satisfaction as an able, hard-working officer, thoroughly acquainted with all the details of Settlement work. The Kánungos of Shorkot and Chiniot have given me great assistance. All statements and papers connected with the assessment of their tahsils have been prepared either by them or under their immediate supervision. They will be able to explain in the future all doubts, difficulties, or discrepancies whatever connected with the land revenue of the district. The Kánún go of Jhan is utterly incompetent. The Sadr Kánungo has not been of any direct use. I have employed him more or less on all work connected with the Settlement but on nothing specially. Too much use cannot be made of Kánungos in the Settlement. They are the only superior permanent officials that are left behind. Finally, I wish to testify to the great assistance given me by Uttar Chand, the District record-keeper. Apart from the reformation he has wrought in his office since he took charge, he has worked over hours for the last three months in taking over the records of this Settlement. Every paper has been examined by him and his assistants with the utmost caution before it has been filed. There has been no fudging whatever. I should mention that Mr. Thomson, now Settlement Officer of Jhelam, was for some three months Assistant Settlement Officer. I do not consider myself justified in pronouncing an opinion on the work of that officer on so limited acquaintance, especially as Mr. Thomson was here during the three hot months of May, June and July, when Settlement work goes on but slowly.

My head clerk, Mr. Bose, has on the whole done well. He has been exceedingly hard worked during the last six months, and has performed his duties zealously and cheerfully.

Mr. Fryer held charge of the Settlement from its commencement to his transfer to Dera Gházi Khán as Deputy Commissioner, with the exception of short intervals, during which Lieutenant Montgomery and Captain Wace held charge. From the 22nd February, 1877, to the 17th September 1880, the operations were under my control without a break.

E. B. STEEDMAN,

Settlement Officer.

18th May, 1881.

APPENDICES

TO THE

JHANG SETTLEMENT REPORT.

STATEMENT

General Abstract of Area, Resources, Jama and Rate

1	2	3	4	5	6	7	8	9	10	11	12
Serial Number.	NAME OF TAHSIL.	Former and present Statement compared.	NUMBER OF MAHALS.				SECTION I.—AREA AS ASSESSED.				
							Total Area.	MINHAI OR NOT ASSESSED.			
			Khalsa.	Khalsa and shared.	Jagir.	Total.		Waste.	Government Bakhia.	Revenue assigned.	Total Unassessed.
1	Chiniot ...	Former	260	...	5	265	4,70,217	21,431	...	20,013	41,444
		Present	260	...	5	265	5,01,285	47,335	...	2,998	50,333
2	Jhang ...	Former	339	13	5	357	5,00,261	83,080	...	3,609	86,689
		Present	343	11	4	358	5,71,022	81,920	...	2,147	84,067
3	Shorkot ...	Former	173	1	...	174	4,36,025	83,691	...	1,792	85,483
		Present	182	7	...	189	4,83,327	81,058	...	1,054	82,112
	District ...	Former	772	19	5	796	14,06,503	1,88,202	...	25,414	2,13,616
		Present	785	23	4	812	15,55,634	2,10,313	...	6,199	2,16,512

A.

the several Assessment Circles of the Jhang district.

13	14	15	16	17	18	19	20	21	22	23
AGED FOR ASSESSMENT IN ACRES.							SECTION II.—RESOURCES. AND CAPABILITIES CONSIDERED IN DIFFERENT ASPECTS.			
MALGUZARI OR ASSESSED.							Area in acres and percentage on Cultivated and Fallow area, as given in column 19.			
Culturable.	Fallow.	Naturally irrigated or Sallaba.	Cultivated.			Total Cultivated and Fallow.	Manured.	Irrigated.	Zabti.	Palkash.
			With artificial irrigation.	Unirrigated.	Total.					
3,55,139	9,383	6,410	56,438	1,403	64,251	73,634	10,358 14.1	56,438 76.6	5,328 7.5	1,328 1.8
3,32,821	20,539	22,224	72,397	2,971	97,592	1,18,131	18,793 15.9	72,397 16.3	9,405 8.	2,368 2.
2,80,640	27,591	26,234	79,004	103	1,05,341	1,32,932	...	79,004 59.4	3,298 2.5	...
3,23,038	29,064	35,508	99,009	336	1,34,853	1,63,917	25,913 15.9	99,009 60.4	15,372 9.4	12,238 7.5
2,49,000	18,131	27,703	55,441	267	83,411	1,01,542	...	55,441 54.6	1,106 1.1	...
2,82,195	21,938	41,016	55,893	173	97,082	1,19,020	4,612 3.9	55,893 47.	6,222 5.2	3,807 3.2
8,84,779	55,105	60,347	1,90,883	1,773	2,53,003	3,08,108	10,358	1,90,883	9,732	1,328
9,38,054	71,541	98,748	2,27,299	3,480	3,29,527	4,01,068	49,318 12.3	2,27,299 56.7	30,999 7.7	18,413 4.6

STATEMENT

General Abstract of Area, Resources, Jama and Rates

1	2	3	4	5	6	7	8	9	10	11	12
Serial Number.	NAME OF TAHSIL.	Former and present Statement compared.	NUMBER OF MAHALS.				SECTION I.—AREA AS ARRANGED				
			Khalsa.	Khalsa and shared.	Jagir.	Total.	Total Area.	MIMHAI OR NOT ASSESSED.			
								Waste.	Government Rakha.	Revenue assigned.	Total Unassessed.
1	Chiniot ...	Former	260	...	5	265	4,70,217	21,431	...	20,013	41,444
		Present	260	...	5	265	5,01,285	47,335	...	2,998	50,333
2	Jhang ...	Former	339	13	5	357	5,00,261	83,080	...	3,609	86,689
		Present	343	11	4	358	5,71,022	81,920	...	2,147	84,067
3	Shorkot ...	Former	173	1	...	174	4,36,025	83,691	...	1,792	85,483
		Present	182	7	...	189	4,83,327	81,058	...	1,054	82,112
	District ...	Former	772	19	5	796	14,06,503	1,88,202	...	25,414	2,13,816
		Present	785	23	4	812	15,55,634	2,10,313	...	6,199	2,16,512

A.—continued.

the several Assessment Circles of the Jhang district.

32	33	34	35	36	37	38	39	40	41	42
CONSIDERED IN DIFFERENT ASPECTS.										
POPULATION.		WELLS.			WATER CAPACITY.					Total area uncultivated and percentage of area uncultivated to total area in thicker types.
Number of.	Per square mile of cultivation, including cultivation of land the revenue of which is assigned.	In use.		Out of use.	Average Rainfall in inches.	Water from Wells.				
		Old.	New.			Average depth of wells in feet to water.	Average cost of constructing a well.	Number of yoke of oxen required per well.	Area one well can irrigate in one year.	
74,292	626	1,749	37	1,002	12·8	..	See para. 95 of the Final Settlement Report.	6	27	3,64,522 75·5
97,771	629	2,054	596	1,410		24		6		3,53,360 70·5
1,11,454	677	3,885½	...	1,412	10·4	...		6	21	3,08,231 61·6
1,44,077	677	1,421½	3,667½	2,031		18		6		3,52,102 61·7
64,980	490	3,038½	...	924	9·7	...		6	17	2,67,131 80·5
75,488	495	2,891	888	912		17		6		3,04,133 60·9
2,50,736	635	8,672½	37	3,338	11	...		6	22	9,39,884 66·8
3,17,266	615	5,866½	5,151½	4,353		20·		6		10,09,595 64·9

STATEMENT

General Abstract of Area, Resources, Jama and Rates in

Serial Numbers.	NAME OF TAHSIL.	Former and Present Statement compared.	24	25	26	27	28	29	30	31
			SECTION II.—RESOURCES AND CAPABILITIES							
			PERCENTAGES OF PRODUCE ARRANGED IN CLASSES AS IN D.				CATTLE.			
			I.	II.	III.	IV.	Number of head of plough cattle.	Entire number of head of cattle.	Number average per Plough, including ploughs used on land the revenue of which is assigned.	Cultivator, including cultivation of land the revenue of which is assigned.
1	Chiniot ...	Former ...	9·2	85·1	3·8	1·9	18,746	88,841	10	6
		Present ...	12·5	83·3	2·3	1·9	27,856	1,30,129	10	9
2	Jhang ...	Former ...	...	...	...	...	28,094	...	...	...
		Present ...	15·7	79·1	3·2	2·	39,868	2,08,696	10	11
3	Shorkot ...	Former ...	...	...	...	...	20,903	83,555	8	...
		Present ...	8·5	78·4	6·1	7·	23,783	1,01,832	9	9
	District ...	Former ...	...	...	...	...	67,743	...	...	...
		Present ...	12·7	80·2	3·7	3·4	91,507	4,40,657	10·	10

A.—continued.

the several Assessment Circles of the Jhang district.

32	33	34	35	36	37	38	39	40	41	42
CONSIDERED IN DIFFERENT ASPECTS.										
POPULATION.		WELLS.			WATER CAPACITY.					
Number of.	Per square mile of cultivation, including cultivation of land the revenue of which is assigned.	In use.		Out of use.	Average Rainfall in inches.	Water from Wells.				Total area uncultivated and percentage of area uncultivated to total area in thicker types.
		Old.	New.			Average depth of wells in feet to water.	Average cost of constructing a well.	Number of yoke of oxen required per well.	Area one well can irrigate in one year.	
74,292	626	1,749	87	1,002	12·8	...	See para. 95 of the Final Settlement Report.	6	27	3,64,522 75·5
97,771	629	2,054	596	1,410		24		6		3,53,360 70·5
1,11,454	677	3,885½	...	1,412	10·4	...		6	21	3,08,231 61·6
1,44,077	677	1,421½	3,667½	2,031		18		6		3,52,102 61·7
64,980	490	3,038½	...	924	9·7	...		6	17	2,67,131 80·5
75,488	495	2,891	888	912		17		6		3,04,133 60·9
2,50,736	635	8,672½	37	3,338	11	...		6	22	9,39,884 66·8
3,17,266	615	5,866½	5,151½	4,353		20·		6		10,09,595 64·9

STATEMENT

General Abstract of Area, Resources, Jama and Rate

Serial Number.	NAME OF TAHSIL.	Former and Present Statement compared.	43	44	45	46	47	48
			CAPACITY FOR EXPANSION.	SECTION III.—SUMMARY AND LAST SETTLEMENT JAMA COMPARED.				
			Head of cattle per acre.	Summary Settlement Jamas.	Jama of last Settlement as in old No. II, Village Statement.	Jama of last Settlement as subsequently altered Smbt. 1931.	Rate of cultivation.	
							Of Summary Settlements.	Of last Settlement Jama as per column 45.
							Rs. A. P.	Rs. A. P.
1	Chiniot ...	Former ...	1/5	1st 82,863 2nd 61,246	67,472	71,755	2 8 10 2 8 5	1 0 10
		Present ...	1/4	...	...	...	...	...
2	Jhang ...	Former ...	...	1st 1,21,519 2d. 1,02,858	1,13,246	1,21,868	1 9 10 2 1 7	1 1 2
		Present ...	1/3	...	...	...	...	...
3	Shorkot ...	Former ...	1/5	1st 98,808 2nd 91,448	86,649	90,283	1 14 1 1 13 2	1 0 7
		Present ...	1/5	...	...	...	...	...
	District ...	Former ...	...	1st 3,03,190 2d. 2,55,552	2,67,367	2,83,906	...	1 0 10
		Present ...	1/3	...	...	...	...	...

JHANG :
SETTLEMENT OFFICE :
The 18th May 1881.

A.—Concluded.*in the several Assessment Circles of the Jhang district.*

49	50	51	52	53	54
SECTION IV.—PROPOSED JAMA WORKED FROM RATES AND ESTIMATES.					REMARKS.
<i>Estimates adopted.</i>			Jama of year preceding intro- duction of new assessments.	New assessment including Pro- gressive Jamas, excluding dates, saji, &c.	
Half Net assets.	1/6th of gross Produce.	As per Revenue rate.			
...	...	...	...	...	In column 51 the upper figures are the Revenue rate assessment on the measurements area, the lower that on the area as subsequently altered by alluvion and diluvion.
1,63,092	1,81,591	99,962 96,956	70,997	96,708	
...	...	...	...	...	
2,46,505	2,36,511	1,51,326 1,49,692	1,22,243	1,51,072	The number of villages does not include Bakh Sadkáná Miráli and Bakh Kúnd Sargáná restored to the zemindars.
...	...	...	...	...	
1,77,717	1,63,660	1,08,290 1,07,214	91,117	1,10,087	
...	...	...	...	...	
5,87,314	5,81,762	3,59,578 3,53,862	2,84,357	3,57,867	

E. B. STEEDMAN,*Settlement Officer.*

Classified abstract of Tenants' holdings

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name of Pargannah.		Tenants with rights of occupancy		Tenants without rights of occupancy.		Total of Tenants paying in cash.	Total of Tenants paying in kind.	Percentage of total cultivated area held by Tenants.	MODE OF PAYMENT OF				
		Cash rents.	Rents in kind.	Cash rents.	Rents in kind.				IN CASH.				
									At Revenue rates only.	At a Revenue rate plus Malikana.	At a consolidated revenue (Chakauti).	Rate per cent of Malikana on Revenue.	
												Highest.	Lowest.
Chiniot.											Rs.	Rs. A. P.	
Holdings ...		251	400	127	9,058	378	9,458	56.8	126	252	...	...	...
Area ...		1,155	3,262	1,029	58,565	2,184	61,627	59.4	661	1,523	...	26	0 12 0
Jhang.													
Holdings...		51	1,036	9	15,816	60	16,852	0	6	52	2	...	...
Area ...		155	7,700	34	88,704	189	96,404	66	29	155	5	...	...
Shorkot.													
Holdings...		4	416	...	6,228	4	6,644	...	...	4	..	...	...
Area ...		11	4,219	...	53,572	11	57,791	55.7	...	11	...	...	...
District.													
Holdings...		306	1,852	136	31,102	442	32,954	0	132	308	2	...	...
Area ...		1,321	15,181	1,063	2,00,841	2,384	2,16,022	0	690	1,689	5	...	...

As several Tahsils, district Jhang.

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
RENT FOUND TO EXIST															
Rate of Kamins' fees per 100 maunds.	IN KIND.														
	<i>Share of grain taken by proprietors after deduction of Kamins fees.</i>														
	$\frac{1}{2}$	$\frac{7}{16}$	$\frac{2}{5}$	$\frac{3}{8}$	$\frac{1}{3}$	$\frac{1}{4} + \frac{1}{4}$ Govt. demand.	$\frac{1}{4}$	$\frac{1}{6}$	$\frac{1}{8}$	$\frac{11}{40}$	$\frac{2}{9}$	$\frac{1}{4} + \frac{1}{4}$ Govt. de- mand.	$\frac{8}{18}$	$\frac{18}{40}$	$\frac{21}{46}$
19	5,075	184	164	100	3,561	284	82	5	3	...	...	...	...	...	...
	33,056	1,208	1,418	741	21,591	3,322	448	23	20	...	...	...	...	...	...
16	14,627	95	368	117	1,276	137	27	5	1	2	1	4	1	6	5
	76,516	525	2,035	867	12,852	1,371	199	48	22	32	27	63	28	74	120
17	6,265	106	...	48	42	115	58	2	...	...	...	...	...	...	...
	53,831	1,412	...	623	408	877	538	33	...	...	...	...	...	...	...
17	25,967	385	532	265	4,879	536	167	12	4	2	1	4	1	6	5
	1,63,403	3,145	3,450	2,231	34,851	5,570	1,185	104	42	32	27	63	28	74	120

(X)

STATEMENT

Classified abstract of Tenants' holdings in

		31	32	33	34	35	36	37	38	39	40	41	42	43
Name of Pargannah.		MODE OF PAYMENT OF												
		IN												
		<i>Share of grain taken by proprietors after</i>												
		$\frac{1}{2} + \frac{1}{2}$ Govt. de- mand.	$\frac{15}{32}$	$\frac{19}{40}$	$\frac{31}{64}$	$\frac{1}{2} + \frac{1}{2}$ Govt. de- mand.	$\frac{1}{2} + \frac{1}{2}$ Govt. de- mand.	$\frac{1}{2} + \frac{1}{2}$ Govt. de- mand.	$\frac{17}{40}$	$\frac{77}{160}$	$\frac{5}{12}$	$\frac{1}{2} + \frac{1}{2}$ Govt. de- mand.	$\frac{11}{24}$	$\frac{109}{320}$
Chiniot.	Holdings ...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Area ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jhang.	Holdings ...	10	21	1	1	4	5	6	21	1	21	2	2	2
	Area ...	136	83	8	7	35	44	51	159	8	239	12	14	32
Shorkot.	Holdings ...	...	3	...	...	...	...	...	...	...	2	...	2	...
	Area ...	...	30	...	...	...	...	...	...	...	18	...	18	...
District.	Holdings ...	10	24	1	1	4	5	6	21	1	23	2	4	2
	Area ...	136	113	8	7	35	44	51	159	8	257	12	32	32

JHANG :

SETTLEMENT OFFICE :

The 18th May 1881.

B.—Concluded.*the several Tahsils, district Jhang.*

44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

RENT FOUND TO EXIST**KIND.***deduction of Kamins' fees.*

$\frac{1}{18} + \frac{1}{18}$ Govt. de- mand.	$\frac{1}{36} + \frac{1}{36}$ Govt. de- mand	$\frac{7}{24}$	$\frac{1}{12} + \frac{1}{12}$ Govt. de- mand.	$\frac{1}{12} + \frac{1}{12}$ Govt. de- mand.	$\frac{2}{9} + \frac{1}{9}$ Govt. de- mand.	$\frac{35}{160} + \frac{1}{160}$ Govt. de- mand.	$\frac{33}{107} + \frac{1}{107}$ Govt. de- mand.	$\frac{33}{80}$	$\frac{31}{80}$	$\frac{34}{120}$	$\frac{1}{4} + \frac{1}{4}$ Govt. de- mand.	$\frac{1}{5}$	Aver- age Rent in kind.	REMARKS.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	...	...	...	42	
4	2	8	4	9	2	7	4	22	13	6	2	...	...	
38	17	51	57	97	36	65	45	190	157	21	26	...	47	
...	...	...	...	...	...	...	...	...	...	...	...	1	...	
...	...	...	...	...	...	...	...	...	...	...	...	3	49	
4	2	8	4	9	2	7	4	22	13	6	2	1	...	
38	17	51	57	97	36	65	45	190	157	21	26	3	46	

E. B. STEEDMAN,*Settlement Officer.*

STATEMENT

General Abstract of Area under Crops showing production

1	2	3	4	5	6	7	8	9	10
Number.	Tahsil.		FIRST ORDER						
			Tobacco.	Vegetables.	Melons.	Bhang.	Poppy.	Sugar-cane.	Safflower.
1	Chiniot	Area ...	368	98	307	...	11	176	...
		Yield per acre...	M. 6	15-0-0	10-0-0	...	M. 3	80-0-0	...
		Value ...	8,616-9-5	1,470	3,070	...	264	14,080	...
2	Jhang	Area ...	446	137	692	1	4	39	1
		Yield per acre...	M. 6	15-0-0	10-0-0	10	M. 3	80-0-0	12
		Value ...	8,293-13-7	2,055	6,920	10	87-4-4	3,120	12
3	Shorkot	Area ...	170	124	168	...	4	7	...
		Yield per acre...	M. 6	15-0-0	20-0-0	...	M. 3	80-0-0	...
		Value ...	3,138-7-4	1,860	3,360	...	87-4-4	560	...
	District	Area ...	984	359	1,167	1	19	222	1
		Yield per acre...	M. 6	15-0-0	13-5-4	10	M. 3	80-0-0	12
		Value ...	19,988-14-4	5,385	13,350	10	438-8-8	17,760	12
		Percentage ...	...	...	...	...	...	...	...

D.

capacity in the several Tahsils of the Jhang district.

11	12	13	14	15	16	17	18
OF CROPS.			SECOND ORDER OF CROPS.				
Cotton.	Indigo.	Total.	Wheat.	Gram.	Sarhal.	Jowar.	Indian corn.
8,466	...	9,426	53,639	2,994	71	10,788	2,166
M. S. 3-39½	...	...	M. S. 8-20½	M. 6	M. 6	M. S. C. 6-32-5	M. S. C. 8-33-15
1,08,888-12-9	...	1,35,689-6-2	6,43,292-10-8	21,290-10-9	668-3-9	90,390-2-6	23,590-2-6
14,052	...	15,372	71,763	4,167	166	20,150	12
M. S. 4-19½	..	...	M. S. 8-18	M. 6	M. 6	M. S. 6-13	M. S. C. 8-33-15
2,01,996-12-9	...	2,22,434-14-8	8,08,493 5-4	25,002	1,562-5 8	1,44,088-3-8	130-10-11
5,738	11	6,222	51,148	6,591	68	7,330	...
M. S. 4-1	8. 20	...	M. S. 8-16	M. S. 5-30	M. 8	M. S. 5-33	...
73,843-3-2	440	83,288-14-10	5,73,338-10-8	42,109-2-8	870-6-4	53,848-12-0	...
28,256	11	31,020	1,76,550	13,752	305	38,268	2,178
M. S. C. 4-6-12	8. 20	...	M. S. C. 8-18-4	M. S. C. 5-36-10	M. S. C. 6-26-10	M. S. C. 6-9-7	M. S. C. 8-33-15
3,84,028-12-8	440	4,41,413-3-8	20,25,124-10-8	88,401-13-5	3,100-15-9	2,87,827-2-2	23,720-13-5
9.	...	...	54.	4.	...	12.	1.

STATEMENT

General Abstract of Area under Crops showing productive capacity

Number.	TAHSIL.		19	20	21	22	23
			SECOND ORDER OF CROPS.				
			Bajra.	Til-seed.	Rice, unhusked.	Turnips.	Total.
1	Chiniot ...	Area... ..	1,494	255	39	9,106	80,552
		Yield per acre	M. 7	M. 4	M. 6	12-0-0	...
		Value ...	15,074-9-5	2,720	719-15-8	1,09,272	9,07,018-7-3
2	Jhang ...	Area... ..	175	1,291	101	10,610	1,08,435
		Yield per acre	M. 6	M. 4	M. 6	12-0-0	...
		Value ...	1,555-8-11	13,226-7-3	1,212	1,27,320	11,22,690
3	Shorkot ...	Area... ..	176	1,538	...	6,846	73,697
		Yield per acre	M. 6	M. 4	...	12-0-0	...
		Value ...	1,536	16,405-5-4	...	82,152	7,69,760-5-0
	District ...	Area... ..	1,845	3,084	140	26,562	2,62,684
		Yield per acre	M. S. C. 6-13-5	M. 4	M. 6	12-0-0	...
		Value ...	18,166-2-4	32,451-12-7	1,931-15-8	3,18,744	27,99,469-6-0
		Percentage ...	1·	1·	...	8·	...

in the several Tahsils of the Jhang district.

24	25	26	27	28	29	30	31
THIRD ORDER OF CROPS.						FOURTH ORDER OF CROPS.	
Barley.	Tará Mira.	Goji.	Másh.	Múng.	Total.	Mattar (Peas).	Moth.
2,457 M. S. C. 10-13-5	8 M. 5	3 M. 10	253 M. 5		2,721 ...	274 6-0-0	256 M. 5
22,818-13-11	48-7-9	38-6-5	2,200-0-1	...	25,105-12-2	1,644	1,638-6-5
2,094 M. S. 9-30	95 M. 5	4 M. 10	3,625 M. 5		5,818 ...	1,299 6-0-0	104 M. 5
18,604-8-8	575-12-2	47-0-11	25,992-13-9	...	45,120-3-6	7,794	611-12-3
1,508 M. S. 9-32	288 M. 6		5,141 M. S. 5-20	344 M. 5	7,281 ...	6,226 8-0-0	18 M. 5
13,441,13-2	2,094-8-8	...	41,889-10-1	2,293-5-4	59,719-5-3	49,808	112-8-0
6,059 M. S. C. 9-28-7	391 M. S. C. 5-13-5	7 M. 10	9,019 M. S. C. 5-6-11	344 M. 5	15,820 ...	7,799 6-10-8	378 M. 5
54,865-3-9	2,718-12-7	85-7-4	69,982-7-11	2,293-5-4	1,29,945-4-11	59,246	2,362-10-8
2	...	...	3	...	...	3	...

STATEMENT

General Abstract of Area under Crops showing productive capacity

Number.	Tahsil.		32	33	34	35
			FOURTH ORDER			
			Massar.	China.	Kangul.	Mandla.
1	Chiniot ...	Area ...	657	1,627	81	7
		Yield per acre ...	M. 4	M. 8	M. 6	M. 6
		Value ...	8,446-8-11	14,563-5-8	209-9-3	51-9-4
2	Jhang ...	Area ...	1,383	1,579	87	109
		Yield per acre ...	M. 4	M. 8	M. 6	M. 8
		Value ...	5,029-1-5	11,483-10-2	222	654
3	Shorkot ...	Area ...	364	1,075	48	112
		Yield per acre ...	M. 4	M. 8	M. 6	M. 8
		Value ...	1,712-15-1	8,600	311-5-7	896
	District ...	Area ...	2,404	4,281	116	228
		Yield per acre ...	M. 4	M. 8	M. 6	M. S. C. 6-26-11
		Value ...	10,188-9-5	34,646-15-10	742-14-10	1,601-4-9
		Percentage ...	1.	1.	...	...

JHANG :
SETTLEMENT OFFICE :
The 18th May 1881.

D.—Concluded.*in the several Tahsils of the Jhang district.*

36	37	38	39	40	41	42	43
OF CROPS.						Total area under Crop.	Total value of the gross produce.
Sowánk.	Rawán.	Maithra.	Samukha.	Kúrá.	Total.		Rs. A. P.
9	83	...	...	...	2,894	95,593	...
M.	M.	...	...	...	...	E. 91,911	...
6	3	...	...	...	...	Do. 3,682	...
65-15-5	112-5-5	...	...	...	21,731-7-8	...	10,89,545-1-3
390	144	...	...	...	5,035	1,34,660	...
M.	M.	...	...	...	...	E. 1,27,495	...
8	3	...	...	...	...	Do. 7,165	...
2,664-13-10	540	...	...	...	28,799-5-8	...	14,19,045-1-7
98	454	509	13	4	8,921	96,121	...
M.	M.	10-0-0	6-0-0	8-0-0	...	E. 94,196	...
8	3	...	...	...	...	Do. 1,925	...
847-9-2	1,702-8-0	5,090	78	32	69,190-13-10	...	9,81,959-6-11
487	631	509	13	4	16,850	8,26,374	...
M. S. C.	M.	10-0-0	6-0-0	8-0-0	...	E. 3,13,602	...
6-26-11	3	...	...	...	...	Do. 12,772	...
3,378-6-3	2,354-13-5	5,090	78	32	1,19,721-11-2	...	34,90,549-9-9
...	...	...	...	...	...	...	...

E. = Ek-fasli.

Do. = Do-fasli.

E. B. STEEDMAN,

Settlement Officer.

APPENDIX 1.

Abstract showing the irrigated and unirrigated soils in each Tahsil of the Jhang district.

CULTIVATED.															
Number.	Tahsil.	IRRIGATED.						UNIRRIGATED.			Total cultivated area.	Abandoned and Appar.	Total cultivated and fallow area.	REMARKS.	
		Chahi Khalis.	Chahi Sailab.	Chahi Jhallari.	Chahi Nahri.	Jhallari.	Nahri.	Total.	Sailab.	Barani.					Total.
1	Chiniot ...	72,543	1,100	110	...	...	...	73,753	22,367	3,006	25,373	99,126	20,844	1,19,970	This statement has been compiled from the Khassra abstracts and includes the area of Revenue assignments.
2	Jhang ...	91,100	7,243	498	...	1,397	...	1,00,238	35,517	336	35,853	1,36,091	29,235	1,65,326	
3	Shorkot ...	42,858	10,639	438	605	1,444	395	56,379	41,038	173	41,211	97,590	22,155	1,19,745	
	Total ...	2,06,501	18,982	1,046	605	2,841	395	2,30,370	98,922	3,515	1,02,437	3,32,807	72,234	4,05,041	

A 1 -
Statement of *Minured and Unmanured area of the Jhang district.*

Number.	Tahsil.	MANURED.			UNMANURED.			Total area under crop.	REMARKS.
		Ek-fasli.	Do-fasli.	Total.	Ek-fasli.	Do-fasli.	Total.		
1	Chinot ...	16,655	2,138	18,793	71,574	1,544	73,118	91,911	By an error subsequently discovered, the halor area has been included in the return of the Jhang Tahsil. The areas of the two other Tahsils are the areas under crop and agree with Statement D. The Jhang area agrees with the total cultivated area of Statement A. and includes 7,358 acres of halor shown as 'Ek-fasli.'
2	Jhang ...	21,345	4,568	25,913	1,06,343	2,597	1,08,940	1,34,853	
3	Sherkot ...	3,876	736	4,612	88,395	1,189	89,584	94,196	
Total of District ...		41,876	7,442	49,318	2,66,312	5,330	2,71,642	3,20,960	

JHANG :
SETTLEMENT OFFICE :
The 18th May, 1881.

E. B. STEEDMAN,
Settlement Officer.

APPENDIX

Statement showing the area held in proprietary right by each tribe

TAHSIL.	NAME OF TRIBE.				SYÁL.		CHADDHAR.		KÁTHIA.	
	DETAILS.				Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.
Chiniot.	Number of holdings	...	...	...	59	...	1,706	...	...	...
	Total area and cultivators	...	...	...	256	45	14,180	2,123	...	...
	Cultivated by Proprietors	...	...	...	65	12	7,040	1,126	...	...
	Cultivated by Taraddadkars	...	...	...	...	...	907	93	...	...
	Cultivated by hereditary tenants	...	...	...	36	6	557	89	...	...
	Cultivated by non-hereditary tenants	...	...	...	155	27	5,676	815	...	...
Jhang.	Number of holdings	...	...	...	7,835	...	...	...	...	...
	Total area and cultivators	...	...	...	40,949	6,391	...	...	...	...
	Cultivated by Proprietors	...	...	...	21,999	3,949	...	...	...	...
	Cultivated by Taraddadkars	...	...	...	760	80	...	...	...	...
	Cultivated by hereditary tenants	...	...	...	404	119	...	...	...	...
	Cultivated by non-hereditary tenants	...	...	...	17,786	2,243	...	...	...	...
Shorkot.	Number of holdings	...	...	...	3,945	...	194	...	295	...
	Total area and cultivators	...	...	...	37,664	3,449	1,421	124	3,168	562
	Cultivated by Proprietors	...	...	...	16,718	1,527	695	78	1,281	285
	Cultivated by Taraddadkars	...	...	...	351	45	...	...	13	3
	Cultivated by hereditary tenants	...	...	...	901	129	...	...	8	...
	Cultivated by non-hereditary tenants	...	...	...	19,694	1,748	726	46	1,866	274
District.	Number of holdings	...	...	...	11,839	...	1,900	...	295	...
	Total area and cultivators...	...	...	...	78,869	9,885	15,601	2,247	3,168	562
	Cultivated by Proprietors...	...	...	...	38,782	5,488	7,735	1,204	1,281	285
	Cultivated by Taraddadkars	...	...	...	1,111	125	907	93	13	3
	Cultivated by hereditary tenants	...	...	...	1,341	254	557	89	8	...
	Cultivated by non-hereditary tenants	...	...	...	36,635	4,018	6,402	861	1,866	274

and how it is cultivated in the *Jhang* district.

KHARRAL.		BHATTI.		REHAN.		BELOCH.		PATHAN.		SYAD.	
Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.
144	...	392	...	146	...	...	...	...	...	2,675	...
830	147	7,574	722	1,340	111	...	...	...	...	18,425	2,757
113	33	3,254	335	706	57	...	...	...	...	3,417	527
...	...	11	1	...	...	...	...	...	...	680	93
24	12	...	...	17	1	...	...	...	...	606	134
693	102	4,309	386	617	53	...	...	...	...	13,722	2,003
...	...	140	...	...	...	2,734	...	44	...	2,269	...
...	...	1,742	179	...	...	16,363	2,054	357	53	17,352	1,894
...	...	528	35	...	...	8,696	1,304	126	28	3,678	490
...	...	...	...	...	...	28	3	...	...	1,130	101
...	...	38	8	...	...	326	46	...	...	663	95
...	...	1,176	136	...	...	7,313	701	231	25	11,881	1,208
...	...	...	...	...	...	855	...	96	...	651	...
...	...	...	...	...	...	8,033	1,067	604	84	5,067	547
...	...	...	...	...	...	4,917	687	153	60	1,898	197
...	...	...	...	...	...	89	11	...	...	91	12
...	...	...	...	...	...	93	17	...	...	34	7
...	...	...	...	...	...	2,934	352	451	24	3,044	331
144	...	532	...	146	...	3,589	...	140	...	5,595	...
830	147	9,316	901	1,340	111	24,396	3,121	961	137	40,844	5,198
113	33	3,782	370	706	57	13,613	1,991	279	88	8,993	1,214
...	...	11	1	...	...	117	14	...	...	1,901	206
24	12	38	8	17	1	419	63	...	...	1,303	236
693	102	5,485	522	617	53	10,247	1,053	682	49	28,647	3,542

APPENDIX

Statement showing the area held in proprietary right by each tribe

TAHSIL.	NAME OF TRIBE.				KURAISHI.		JAT.	
	DETAILS.				Area in acres.	Cultivators.	Area in acres.	Cultivators.
Chiniot.	Number of holdings	...	...	...	...	...	7,572	...
	Total area and cultivators	...	...	...	...	...	38,682	5,698
	Cultivated by Proprietors	...	...	...	...	...	21,566	3,086
	Cultivated by Taraddadkars	...	...	...	...	...	462	70
	Cultivated by hereditary tenants	...	...	...	...	...	831	203
	Cultivated by non-hereditary tenants	...	...	...	...	...	15,823	2,339
Jhang.	Number of holdings	...	...	...	380	...	4,704	...
	Total area and cultivators	...	...	...	2,900	462	27,803	3,625
	Cultivated by Proprietors	...	...	...	1,215	264	17,052	2,468
	Cultivated by Taraddadkars	...	...	...	76	9	288	36
	Cultivated by hereditary tenants	...	...	...	61	12	134	33
	Cultivated by non-hereditary tenants	...	...	...	1,548	177	10,329	1,088
Shorkot.	Number of holdings	...	...	...	1,101	...	1,690	...
	Total area and cultivators	...	...	...	10,139	853	12,491	1,744
	Cultivated by Proprietors	...	...	...	3,111	281	7,211	928
	Cultivated by Taraddadkars	...	...	...	411	25	97	18
	Cultivated by hereditary tenants	...	...	...	788	101	165	14
	Cultivated by non-hereditary tenants	...	...	...	5,829	446	5,018	784
District.	Number of holdings	...	...	...	1,481	...	13,966	...
	Total area and cultivators	...	...	...	13,039	1,315	78,976	11,067
	Cultivated by Proprietors	...	...	...	4,326	545	45,829	6,482
	Cultivated by Taraddadkars	...	...	...	487	34	847	124
	Cultivated by hereditary tenants	...	...	...	849	113	1,130	250
	Cultivated by non-hereditary tenants	...	...	...	7,377	623	31,170	4,211

JHANG :
SETTLEMENT OFFICE :
The 18th May, 1881.

B.—Concluded.

and how it is cultivated in the Jhang district.

KAMINS.		MISCELLANEOUS MAHOMMEDANS.		HINDUS.		TOTAL.		
Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area in acres.	Cultivators.	Area Percent- age.
295	...	2,018	...	710	...	15,777	...	...
584	191	12,914	1,541	4,341	719	99,126	14,034	100.
372	108	5,122	593	905	179	42,560	6,056	43.
...	...	316	41	180	35	2,556	333	3.
...	...	164	21	106	17	2,341	483	2.
212	83	7,312	886	3,150	483	51,669	7,182	52.
206	...	981	...	3,749	...	23,042	...	...
926	231	5,198	901	22,501	4,046	1,36,091	19,836	100.
512	161	1,831	397	7,096	1,018	62,733	11,014	46.
30	4	191	37	879	120	3,382	390	2.
...	...	114	10	581	117	2,321	440	2.
384	66	3,062	457	13,945	1,891	67,655	7,992	50.
132	...	605	...	1,568	...	11,132	...	...
493	154	5,291	613	12,711	2,096	97,082	11,293	100.
255	66	1,936	254	4,848	1,098	43,023	5,461	44.
12	4	25	...	164	27	1,253	145	1.
22	6	21	2	886	59	2,418	335	3.
204	78	3,309	357	7,313	912	50,888	5,352	52.
633	...	3,604	...	6,027	...	49,891	...	...
2,003	576	23,403	3,055	39,553	6,861	3,32,299	45,183	100.
1,139	335	8,889	1,244	12,849	3,195	1,48,316	22,531	45.
42	8	532	78	1,223	182	7,191	868	2.
22	6	299	33	1,073	193	7,080	1,258	2.
800	227	13,683	1,700	24,408	3,291	1,69,712	20,526	51.

E. B. STEEDMAN,

Settlement Officer.

APPENDIX

Statement showing the Area Cultivated

Tahsil.	NAME OF TRIBE.	SYÁL.	CHADDHAR.	KÁTHIA.
	Details.	Area in acres.	Area in acres.	Area in acres.
Chiniot.	Number of holdings	170	1,950	...
	Total cultivated	1,075	11,698	...
	Cultivated by Proprietors	65	7,040	...
	Cultivated by Taraddadkars	...	651	...
	Cultivated by hereditary tenants	41	405	...
	Cultivated by non-hereditary Tenants	969	3,602	...
Jhang.	Number of holdings	7,177	...	...
	Total cultivated	36,197	...	...
	Cultivated by Proprietors	21,899	...	...
	Cultivated by Taraddadkars	1,167	...	...
	Cultivated by hereditary Tenants	526	...	...
	Cultivated by non-hereditary Tenants	12,505	...	...
Shorkot.	Number of holdings	3,042	127	147
	Total cultivated	26,659	1,251	1,404
	Cultivated by Proprietors	16,718	695	1,281
	Cultivated by Taraddadkars	360	...	15
	Cultivated by hereditary Tenants	926	...	40
	Cultivated by non-hereditary tenants	8,655	556	68
District.	Number of holdings	10,389	2,077	147
	Total cultivated	63,941	12,949	1,404
	Cultivated by proprietors	38,782	7,735	1,281
	Cultivated by Taraddadkars	1,527	651	15
	Cultivated by hereditary tenants	1,493	405	40
	Cultivated by non-hereditary tenants	22,129	4,158	68

4.
By each Tribe in the Jhang district.

KHARRAL.	BHATTI.	REHAN.	BELOCH.	PATMAN.	SYAD.
Area in acres.	Area in acres.	Area in acres.	Area in acres.	Area in acres.	Area in acres.
151	651	112	...	...	814
838	4,491	906	...	...	4,205
118	3,254	706	...	...	3,417
...	206	...	...	...	195
...	70	...	...	...	83
725	961	200	...	...	510
...	136	...	2,194	60	814
...	1,226	...	12,106	378	5,299
...	528	...	8,696	126	3,678
...	15	...	46	...	112
...	22	...	53	12	10
...	661	...	3,311	240	1,499
...	...	...	820	91	357
...	...	...	7,137	584	2,606
...	...	...	4,917	153	1,998
...	...	...	126	..	31
...	...	...	32	...	32
...	...	...	2,062	481	645
151	787	112	3,014	151	1,985
838	5,717	906	19,243	962	12,110
118	3,782	706	13,613	279	3,993
...	221	...	172	...	338
...	92	...	85	12	125
725	1,622	200	5,373	671	2,654

APPENDIX

Statement shewing the Area Cultivated

Tahsil.	NAME OF TRIBE.	KURAISHI.	JAT.	KAMINS.
	Details.	Area in acres.	Area in acres.	Area in acres.
Chiniot.	Number of holdings	...	8,005	1,489
	Total cultivated	...	52,792	8,016
	Cultivated by Proprietors	...	21,566	372
	Cultivated by Taraddadkars	...	1,181	17
	Cultivated by hereditary Tenants	...	1,241	176
	Cultivated by non-hereditary tenants	...	28,804	7,451
Jhang.	Number of holdings	256	8,128	1,669
	Total cultivated	1,724	50,574	12,451
	Cultivated by Proprietors	1,215	17,052	512
	Cultivated by Taraddadkars	45	1,466	216
	Cultivated by hereditary tenants	50	1,158	149
	Cultivated by non-hereditary tenants	414	30,898	11,574
Shorkot.	Number of holdings	386	3,486	1,229
	Total cultivated	3,850	31,734	10,430
	Cultivated by Proprietors	3,111	7,211	255
	Cultivated by Taraddadkars	75	417	31
	Cultivated by hereditary Tenants	7	1,066	149
	Cultivated by non-hereditary tenants	657	23,040	9,995
District.	Number of holdings	642	19,619	4,387
	Total cultivated	5,574	1,35,100	30,897
	Cultivated by Proprietors	4,326	45,829	1,139
	Cultivated by Taraddadkars	120	3,064	264
	Cultivated by hereditary tenants	57	3,465	474
	Cultivated by non-hereditary tenants	1,071	82,742	29,020

JHANG :
SETTLEMENT OFFICE :
The 18th May, 1881.

4.—Concluded.

by each tribe in the Jhang district.

MISCELLANEOUS MAHOMMEDANS.	HINDUS.	TOTAL.		REMARKS.
Area in acres.	Area in acres.	Area in acres.	Percentage.	
1,596	779	15,717	...	
10,432	4,673	99,126	100	
5,122	905	42,560	43	
169	137	2,556	3	
78	247	2,341	2	
5,063	3,384	51,669	52	
1,294	1,314	23,042	...	
6,474	9,662	1,36,091	100	
1,831	7,096	6,273	46	
80	285	3,383	2	
244	97	2,321	2	
3,369	2,184	67,655	50	
444	1,003	11,132	...	
4,024	7,403	97,082	100	
1,936	4,848	43,023	44	
98	100	1,253	1	
33	133	2,418	3	
1,957	2,322	50,888	52	
3,334	3,096	49,891	...	
20,930	21,738	3,32,299	100	
8,889	12,849	1,48,316	45	
297	522	7,191	2	
355	477	7,080	2	
11,389	7,890	1,69,712	51	

E. R. STEEDMAN,

Settlement Officer.

APPENDIX 5 A.

Original Case Work disposed of by each officer exercising powers in the Jhang Settlement.

Number.	Name of Officer.	Decided in Appendix A.	Decided in Appendix B.	Decided in Appendix C.
1	F. W. R. Fryer, Esquire, Settlement Officer	79	...	1,220
2	Lieutenant J. A. L. Montgomery, Settlement Officer...	11	...	154
3	E. B. Steedman, Esquire, Settlement Officer	39	...	1,278
4	R. G. Thomson, Esquire, Assistant Settlement Officer...	40	10	...
5	Munshi Gopal Das, Extra Assistant Settlement Officer	20	...	103
6	Moulvi Abdul Ghani, Extra Assistant Settlement Officer	492	27	777
7	Munshi Mala Singh, Superintendent Jhang	642	235	2,964
8	Munshi Asa Nand ... }	349	42	1,818
9	Munshi Alif Din ... } Superintendents Chiniot ...			
10	Munshi Nazar Mahomed ... }	317	70	1,877
11	Munshi Mahes Dás ... } Superintendents Shorkot ...			
12	Munshi Alif Din ... }	417	38	2,007
13	Munshi Rám Sing ... } Superintendents Machiwál			
14	Munshi Thakar Das ... }	184	46	1,020
TOTAL ...		3,086	567	12,209

JHANG :
SETTLEMENT OFFICE :
The 18th May, 1881.

E. B. STEEDMAN,
Settlement Officer.

APPENDIX 5 B.

Statement showing the number of Judicial and Revenue Appeals and Criminal cases decided in the Jhang Settlement.

Number.	NAME.	JUDICIAL APPEALS.					REVENUE APPEALS.					E.—CRIMINAL CASES.	
		Number of cases decided.					Number of cases decided.					Name of Judicial Officers.	Decided.
		Rejected at first hearing, Sec. 7 of Act IX of 1873.	Remanded for retrial, Section 351 of Act VIII of 1859.	Decreed for Appellant.	Decreed for Respondent.	Total Decided.	Rejected at first hearing.	Remanded for retrial.	Decreed for appellant.	Decreed for respondent.	Total decided.		
1	M. Mala Sing, Supdt. Jhang	20	30	86	84	220	62	4	42	9	117	F. W. R. Fryer, Esquire	14
2	M. Arjmand, Tahsildar Jhang	...	1	2	...	3	...	...	...	...	...	...	...
3	M. Asa Nand, Supdt. Chinot	...	6	14	22	46	...	...	...	...	...	Lieut. J. A. L. Montgomery	3
4	M. Alif Din, Supdt. Chinot	...	1	22	18	44	25	1	39	23	88	E. B. Steedman, Esquire	26
5	M. Nazar Mahomed, Supdt. Shorkot	...	12	23	18	56	1	...	...	...	1	Munshi Gopal Das	2
6	M. Mahes Das, Supdt. Shorkot	...	1	11	18	37	45	3	23	4	75	Moulvi Abdul Ghani	30
7	M. Alif Din, Supdt. Machiwal	...	4	21	44	75	...	3	...	...	3	...	...
8	M. Ram Sing, Supdt. Machiwal	...	...	2	3	5	...	...	...	...	...	...	...
9	M. Thakar Das, Supdt. Machiwal	1	3	12	7	23	18	7	13	6	44	...	...
	TOTAL	44	58	193	214	509	151	18	117	42	328	TOTAL	75
1	F. W. R. Fryer, Esquire, S. O.	8	14	36	40	98	1	...	...	1	2	...	...
2	Lieut. J. A. L. Montgomery, S. O.	6	5	...	6	17	...	...	...	...	...	...	...
3	E. B. Steedman, Esquire, S. O.	8	17	65	62	162	9	5	25	9	48	...	...
4	R. G. Thomson, Esquire, A. S. O.	...	...	2	3	5	...	...	...	...	...	...	...
5	Munshi Gopal Das, E. A. S. O.	...	3	6	2	11	...	...	...	...	...	...	...
6	Moulvi Abdul Ghani, E. A. S. O.	22	19	84	101	226	141	13	92	32	278	...	...

JHANG :

SETTLEMENT OFFICE :
The 18th May, 1881.

E. B. STEEDMAN,

Settlement Officer.

APPENDIX 5 C.

Classified Return of Judicial and Revenue cases decided in the Jhang Settlement.

Number.	DESCRIPTION OF SUITS.							
A.—ORDINARY SUITS FOR RIGHTS.								
1	Contracts ...	...	...	...	...	...	...	298
2	Inheritance ...	...	...	...	...	...	...	530
3	Gifts ...	...	...	...	...	...	...	13
4	Right of pre-emption ...	...	...	...	...	...	...	116
5	River action ...	...	...	...	...	...	...	12
6	Other cause ...	...	...	...	...	...	...	945
7	Suits to recover possession of immoveable property under Section 9 of the Specific Relief Act ...	...	...	...	...	...	...	14
8	Suits to compel specific performance of contracts ...	...	...	...	...	...	...	7
9	Validity of adoption ...	...	...	...	...	...	...	3
10	Validity of wills ...	...	...	...	...	...	...	21
11	Validity of acts of Hindu widows ...	...	...	...	...	...	...	12
12	Correctness of an entry in a record of rights under Section 20 of Act XXXIII of 1871 ...	...	...	...	...	...	...	971
13	Other rights affecting immoveable property not expressly provided for ...	...	...	...	...	...	...	47
14	Suits for or relating to partition ...	...	...	...	...	...	...	2
15	Suits to set aside or rectify any instrument, contract, order, award, or judgment ...	...	...	...	...	...	...	1
	Total of A. ...	...	...	...	...	...	...	3,086
B.—RENT SUITS AND SUITS UNDER PUNJAB TENANCY ACT.								
16	Rent Suits.	{ Suits to recover arrears of rents from Tenants without rights of occupancy ...						...
17		{ Suits to recover arrears of rents from Tenants with rights of occupancy ...						9
18		{ Suits not included in above 5 columns not being suits under Punjab Tenancy Act ...						498
19	Suits under Punjab Tenancy Act.	{ Suits to establish rights of occupancy under Section 8 on other grounds than those mentioned in previous sections of Act... ..						3
20		{ Suits under Section 5 by tenants for rights of occupancy ...						25
21		{ Suits under Section 6 by landlord for rebuttal of presumptive right of occupancy ...						1
22		{ Suits under Section 10 and 11 for enhancement of rent ...						9
23		{ Suits under Section 14 for abatement of rent ...						1
24		{ Suits for arrears of rent whose remission is allowed under Section 15 ...						1
25		{ Suits under Section 18 to set aside award of division and appraisement of produce taken for rent ...						8
26		{ Suits under Section 19 by landlord for ejectment of tenants with rights of occupancy, Section 19, clause 1 ...						3
27		{ Suits under Section 20 by landlord for ejectment of tenants without rights of occupancy ...						5
28		{ Suits under Section 25 by tenants to contest notice of ejectment ...						1
29		{ Suits under Section 20 by tenants on account of illegal ejectment ...						3
	Total of B. ...	...	...	...	...	...	...	567
	Total of Judicial cases A. and B. ...	...	...	...	...	...	...	3,653

APPENDIX 5 C.—Concluded.

Classified Return of Judicial and Revenue cases decided in the Jhang Settlement.

No.	DESCRIPTION OF SUITS.						
30	Village Officers.	{ Zaildars' cases	...	...	...	...	6
31		{ Chief Lambardar's cases	...	...	...	...	3
32		{ Lambardar's cases... ..	...	...	...	...	1,141
33		{ Patwari's cases	...	...	...	...	4
34	Settlements.	{ Erection of boundaries, Section 22 of Act XXXIII of 1871	...	...	...	...	42
35		{ Arbitration cases, Section 23 of Act XXXIII of 1871, not being boundary or partition cases	...	...	...	...	4
36		{ Demarcation of Forest lands under Punjab Forest rules (Schedule 1 of Act IV of 1872)	...	...	...	...	55
37		{ Grants of Revenue to gardens and groves, Finl. Comr's. Book Circular No. 1 of 1870, roadside grants and other grants, C. XII of 1875	...	...	...	...	316
38		{ Investigations, grants and resumptions of assignments other than the preceding	...	...	...	...	82
39		{ Alluvion and Diluvion cases	...	...	...	...	1,286
40		{ Suits relating to remission of Revenue	...	...	...	...	34
41	R. Regis- tration.	{ Mutations in the Registers other than lambardari cases	...	...	...	...	2,620
42		{ Complete partitions of estates	...	...	...	...	23
43		{ Partition of lands held in joint ownership	...	...	...	...	1,389
44		Under Section 17 for division or appraisement of produce	...	...	...	...	33
45		Under Section 23, service of notice of ejectment	...	...	...	...	7
46		Miscellaneous Revenue cases	...	...	...	...	3,164
Total of Revenue cases C. ...							15,209

JHANG:

SETTLEMENT OFFICE:

18th May, 1881.

E. B. STEEDMAN,

Settlement Officer.

APPENDIX 6.
HOUSEHOLD FURNITURE LIST.

Number.	Vernacular name.	Of what made.	Cost.		REMARKS.
			Highest.	Lowest.	
			Ra. A. P.	Ra. A. P.	
1	Degchá ...	Copper ...	3 0 0	...	A pot or vessel used for boiling and baking meat.
2	Parát ...	Brass ...	5 0 0	3 0 0	A large plate used for kneading meal.
3	Tisht ...	Brass or copper ...	6 0 0	1 8 0	A large basin or dish in which food is served up.
4	Mungar ...	Do. ...	Ra. 2 to 3	1 8 0	A large cup used for drinking purposes.
5	Aftábá ..	Do. ...	...	...	A water jug with a spout.
6	Lótá ...	Do. ...	...	...	A large saucer-shaped vessel.
7	Rakábi ...	Do. ...	1 0 0	0 8 0	A plate.
8	Glás ...	Glass ...	1 0 0	0 8 0	A glass tumbler.
9	Sabúchá ...	Earthen ...	...	0 0 6	A vessel for keeping water in.
10	Sáhnak ...	Do. ...	...	0 1 0	A vessel for kneading meal.
11	Aftábá ...	Do. ...	...	0 1 0	As in No. 5.
12	Chatúrú ...	Do. ...	...	0 1 0	A vessel for keeping meal and grain in.
13	Dúdhkárni ...	Do. ...	...	0 0 3	A vessel in which milk is boiled.
14	Doli ...	Do. ...	...	0 0 3	A saucer-shaped cup for drinking water.
15	Píálá ...	Do. ...	...	...	An earthen cup for drinking water.
16	Kúni ...	Do. ...	...	0 2 0	A vessel in which meat, vegetables &c. are boiled and baked.
17	Dólá ...	Do. ...	...	0 0 6	A vessel for bringing water from the well.
18	Patrótá ...	Do. ...	...	0 0 3	A kind of dish on which bread is served up.
19	Thelán ...	Do. ...	...	0 0 3	A vessel in which boiled rice and pulse is served up.
20	Kuppá or Kúppián ...	Leather ...	1 4 0	0 12 0	Oil vessel.

APPENDIX 6.—Continued.

Household furniture list.

Number.	Vernacular name.	Of what made.	Cost.		REMARKS.
			Highest.	Lowest.	
			Rs. A. P.	Rs. A. P.	
21	Maghián ...	Earthen ...	0 1 0	0 0 6	A vessel for storing butter and ghi.
22	Teldán ...	Wood ...	0 1 6	0 0 6	A vessel in which perfumes &c. are kept.
23	Cherágh ...	Iron ...	0 4 0	0 2 0	Lamp.
24	Cherágh ...	Earthen ...	...	...	do.
25	Chamchá ...	Wood & iron,	...	...	Spoon, one made of wood is called Dóí.
26	Chográ ...	Earthen ...	...	0 0 3	A vessel in which there are two receptacles, one for keeping salt and the other for turmeric.
27	Chhagal ...	...	...	0 1 6	A basin for washing hands.
28	Karáhí ...	Iron ...	4 0 0	1 0 0	Pan.
29	Karchhí ...	Do. ...	0 10 0	0 8 0	Spoon.
30	Tawa ...	Do. ...	1 4 0	0 8 0	Griddle.
31	Dátrí ...	Do. ...	0 4 0	0 2 0	A sickle.
32	Ramba ...	Do. ...	0 8 0	0 4 0	A spud for cutting grass.
33	Kohárí ...	Iron ...	1 4 0	0 8 0	An axe.
34	Karad ...	...	0 8 0	0 2 0	Chopper.
35	Cháipái ...	Wood ...	2 0 0	0 8 0	A bedstead.
36	Pihri ..	Do. ...	0 12 0	0 4 0	A low stool on which women sit.
37	Charkhá ...	Do. ...	5 0 0	1 8 0	A wheel for spinning cotton.
38	Chakkí ...	Stone ...	8 0 0	3 0 0	A mill for grinding corn.
39	Kiriyán ...	Sir kana and Tilí.	0 4 0	0 2 0	A kind of bed for sleeping and sitting on.
40	Phúrián ...	...	0 2 0	0 1 0	Mat made of date palm fibre.
41	Manhiyán ...	Wood ...	1 8 0	0 6 0	A wooden bedstead on which children sleep, and clothes and utensils &c. are kept.
42	Kalotí ...	Earthen ...	2 0 0	1 0 0	A vessel for keeping corn in similar to Barolí.

APPENDIX 6.—Continued.

Household furniture list.

Number.	Vernacular name.	Of what made.	COST.		REMARKS.
			Highest.	Lowest.	
			Rs. A. P.	Rs. A. P.	
43	Chaghri ...	...	0 12 0	0 8 0	A vessel for keeping corn in, similar to Bharoli. A small one.
44	Khallar ...	Leather ...	0 12 0	0 8 0	A bag of sheep and goat's skin, used for keeping grain, flour, clothes, &c. in.
45	Taung ...	Sar káná ...	1 4 0	0 8 0	A basket or box made of Sar káná reeds.
46	Chhaj ...	Do. ...	0 3 0	0 1 0	A winnowing tray.
47	Chhajlf ...	Do. ...	0 1 6	0 1 0	A small one.
48	Chhannán ...	Leather ...	...	0 1 0	A sieve for sifting meal.
49	Hangf ...	Thin cloth ...	0 4 0	0 2 6	A sieve for sifting flour.
50	Dibbá ...	Wood ...	2 0 0	0 8 0	A small box for keeping ornaments &c. in.
51	Dibiya ...	Do. ...	0 4 0	0 2 0	A box in which women keep their cosmetics.
52	Parún ...	Brass & Iron,	1 8 0	0 8 0	A sieve.
53	Tokra ...	Wickerwork	0 6 0	0 4 0	A basket.
54	Tokri ...	Do. ...	0 3 0	0 2 0	A small basket.
55	Chattá and ...	Wood ...	1 8 0	0 12 0	Mortar and pestle.
56	Mohla, Pachchi ...	Kana and Tilf	0 2 0	0 1 0	A box.
57	Madhání ...	Wood ...	0 8 0	0 4 0	Churn.
58	Dadri (1) and Danda (2)...	(1) Earthen... (2) Wooden...	0 1 0	0 0 6	Mortars and pestles.
59	Kót ...	Tilf and Kana	0 2 6	0 1 6	A basket used by newly married women and young girls in which cotton for spinning is kept.
60	Jhagga ...	Wood ...	...	0 0 6	A small churn.
61	Hamámdasta	Wood & iron	0 6 0	0 3 0	A small iron and wooden mortar in which medicines or spices are ground and pounded.

APPENDIX 6.—Concluded.

Household furniture list.

Number.	Vernacular name.	Of what made.	Cost.		REMARKS.
			Highest.	Lowest.	
			Rs. A. P.	Rs. A. P.	
63	Chhíkki ...	Rope ...	0 4 0	0 0 3	A cradle hung from the roof of the house in which milk pots &c. are kept.
64	Nehón ...	Wood ...	0 4 0	0 2 0	A branching stick fixed in the ground on which pots and pans used in the dairy are hung.
65	Chouki ...	Wood ...	1 0 0	0 8 0	A wooden stool.
66	(1) Atterán & (2) Selál.	Wood and iron	...	0 0 6	1. A wooden reel on which cotton threads are wound. 2. A long iron needle for winding thread from.
67	Urá ...	...	...	...	A reel.
68	Perotá ...	Tlí and Káná	0 4 0	0 2 0	A box of káná.
69	Shishá ...	...	0 8 0	0 2 0	A looking glass.
70	Surmedání ...	Metal ...	0 6 0	0 4 0	A box for keeping collyrium in.
71	Suramchú ...	...	...	0 0 6	A long thin piece of metal by which colour is applied to the eyes.
72	Shána ...	Wood ...	0 3 0	0 2 0	Comb.
73	Húkká ...	Earthen and leather	1 0 0	0 8 0	Pipe.
74	Nardbán ...	Wood ...	1 0 0	0 12 0	A ladder to climb on to the roof of the house.
75	Diwát ...	Wood ...	0 3 0	0 2 0	A lamp stand.
76	Pháhórá ...	...	0 3 0	0 2 0	A wooden scraper by which stables or cowsheds are cleaned.
77	Akha ...	...	0 6 0	0 3 0	A square wooden bench on which only one water pot is kept.
78	Bohári and Bokhar ...	...	...	...	A broom.
79	Kúchchan ...	...	...	...	A kind of brush for washing out milk vessels.
80	Topa ...	...	0 8 0	0 4 0	A measure.
81	Paropí ...	...	...	...	½th Topa.
82	Píhrá ...	...	2 0 0	1 0 0	A kind of chair on which newly married women or young girls sit.

JHANG :
SETTLEMENT OFFICE ;
The 18th May, 1881,

E. B. STEEDMAN,
Settlement Officer.

ndhá khad ná máwe th
A mouse can't get into his hole and yet
Literally 'máwe' means 'contains.'

Gidar drákh na apare thú kourí.
The Jackal could not reach the grapes: he spat and said they were sour.

3. Anbí nihání te káth dá ustará.
A blind barberess and a razor of wood.

4. Múnh na mathá te jin paháron lathá.
No mouth or forehead and a fairy has come down from the hills (of an ugly woman who pretends to be beautiful.)

5. Zát dí píddí te chhattá bázán dí.
By nature a water-wagtail and with the swoop of a hawk! *Fortes creantur fortibus ac bonis &c.*

6. Pat dí pichhárí te múnj díáu wágán.
Heel ropes of silk and a bridle of mûnj.

7. Ut bolesí te jál dá mûshk ásí.
A camel will speak and the smell of pílá be perceived. 'What can you expect from a pig but a grunt.'

8. Múnh kálá te níle pair.
A black face and blue feet. A great rascal.

9. Kálá bahman, bagga chúra, te dāhriwālī ran, trehí van kówan.
A dark brahman, a fair chúra, and a bearded woman, are all three contrary to nature.

10. Trehí ráh kúráh bher bhúsí, marl nún chakkí, te ran nún ráh.
Three ways are bad ways a brown sheep, to a man a handmill, to a woman a journey.

mominán te andar káfirán.
and heretics at heart.

12. Hath na palle te kisé halle.
He has nothing in his hand or his purse and shakes his pockets.
13. Khakhán di jhugí jand khand dá parnála.
A shed of grass and spouts of ivory.
14. Aklon ghuttí dúmní surmá pái nak.
A mairasin devoid of sense puts collyrium on her nose.
15. Gáu na vachchí te níndar páwe achchí.
Neither cow nor calf and one sleeps well. (It is well to have nothing to do with disputes.)
16. Khú payá thál, na mehná na gál.
The platter has fallen into the well, what is the use of accusation or abuse
(No good crying over spilt milk.)
17. Vaddí kar baháí jo perá le trund.
Thinking you were honest (respectable) I set you (to bake bread) and you break off and steal dough.
18. Badhí lak árorián múnán koh Láhór.
When an Arora girds up his loins, he makes the distance to Lahore only three quarters of a kós.
19. Ghar dāná nahín ammān phín chale.
No grain in the house and mother going to grind (písna písan, píwan, píhan, phín=to grind.)
20. Dúmán ghar viváh, jíwen bháwín tíwen gán.
It is a wedding in a Mirásí house, sing just as you like.
21. Ghar bhukh te búhe te deorhí.
Famine inside and a deorhi outside.
22. Jamíyá putr te vandyus ret.
A son born and he distributed sand !
23. Chitte Kapre Saláman di chattí.
White clothes and salaams a dead loss. Refers to men who wear white clothes who have no right to do so.

24. Channá tapsí, te bhár bhansí.
The gram will jump and will burst the oven.
25. Chor úchchakká choudrí lúndí ran pardhán.
Choudries are thieves and pickpockets, the respectable men are profligates.
26. Pablí rang na ruttí, badrangon badrang.
The first colour didn't take, ill-coloured that it is.
27. Mán marírí píú tándlá dhí kesar dí jar.
The mother a weed, the father ditto, the daughter a root of saffron.
28. Change káran pír gáí suthan lán fakír láí.
She went for good deeds to the fakír and the fakír stripped her of her pyjámás.
29. Dáchí trih todá paintális.
A camel 30, and the todá 45, i. e. the young one is worth half as much again as his mother (or father) ! !
30. Khú bhángá áthwán laráí adho adh.
His share in the well is one eight, and his suit is for half.
31. Uth na sake te tín bakhre.
He can't even get up and yet wants three shares.
32. Palle nahín paisá te Jumma rát parníwaná.
Not a penny in his pocket and going to be married on a Thursday.
33. Nání dá sútr te dohtrá dallál.
The grandmother's thread and the grandson the broker.
34. Syad ráhk te kalandar bhútár.
A Syad the tenant and a Kalandar the landlord.
35. Jamyá bál te íhó hal.
It has always been this since he was born.
36. Kutte dí kabr te mashrú dí úchár.
A dog's grave and a covering of striped cloth.

37. Chorán de kapre te dāngán de gaz.
Stolen property and clubs for yard-measures.
38. Lote ghar na jándá maghíán dá ustád.
He can't make a well pot and teaches how to make saráís !
39. Anhí píhe te chattan kutte, átá ghatte ki na ghatte.
If a blind woman grinds and dogs lick, does the átá diminish or not diminish ?
40. Zát dá páwli te nám Fattedh Khán.
A weaver by tribe and his name Fattedh Khán.
41. Nachan lagí te ghunghat kiyá.
When she began to dance what was the use of a veil.
42. Kajal kán legayá akh tarí rahí.
The crow took away the eye-salve and the eye stayed open.
43. Dārhi Shekhán dí, kam shaitánán dá.
His beard is that of a priest and his acts those of a fiend.
44. Chittí kabr te murda be ímán.
A whitened sepulchre and the dead a heretic.
45. Zát dá bhúnd wásná goláb dá.
In kind a dung beetle and wishes for a rose.
46. Lúndí chirrí te kapúrí nám.
A bird without a tail and you call yourself ' kapúrí.'
47. Pattiyá pahár te niklya chúha.
' *Montes perturiunt, nascetur ridiculus mus.*'
48. Khattú áwen dardá makhattú áwen lardá.
The industrious (son) comes and is respectful, the idle (son) comes and quarrelsome.
49. Anhá kuttá wá nún bhonke.
A blind dog barks at the wind.

She ran till she died and did not even get to --

4. Har misáláh piplámúl.
He is as red pepper in every sauce. He turns his hands to every thing.
52. A'shikán chhán na chappáří na búhe nún ták.
For lovers there is neither shade nor shelter nor a door in the door frame.
53. Káth dí bíllí miún kyún kare.
You can't expect a wooden cat to mew.
54. Kotha usárayá trikhán visárayá.
When the house was built he forgot the carpenter. Visarná = to be forgotten.
55. Ráje de ghar motián dá kál.
The house of a king and a famine of pearls. (As if one asked a Jat for milk and he said he had none.)
56. Kolián dí dalláli vich múnh kálá.
In selling charcoal one's face is blackened. (Who can touch pitch and be not defiled.)
57. Murda bole te kafan pháre.
The corpse speaks and bursts the shroud.
58. Na hal na panjálí te Núre dí bháiwáli.
He has neither plough nor yoke and claims to be Núr's partner.,
59. Lelá liyá ún nún ultá chare kapáh.
He bought a lamb for wool and it is eating up the cotton.
60. Páwalí de kutte shíh nún bhonken ultá bachchá marwáuś.
The weaver's dogs barked at the tiger, he wrongly whipped his child.
61. Uthán nál garíde khede kamli páwaliáni.
The foolish weaveress wrestles with camels.
62. Aráin kam táin gáin Katch táin.
(Give me) an Aráin for work, a cow to Katik.

63. Dám, brahman, bakrí, nind wela na pakrí.
A minstrel, a brahman, a goat, in time of need are of no use. Pakarna=
to assist.
64. Phadhíán púchal bher dá na urár na pár.
A sheep's tail to catch hold of is neither on one side nor on the other.
Applied to persons who don't know their own mind, who are of no use.
65. Anhí dí vautí Khúdá rakhá,
God alone preserves a blind man's wife (from evil).
66. Uthán bhattán te ukánh joban máho máh.
Camels, ovens, and the Ukánh are in heat in Mágh.
67. Aiyar payá bághiyár te kutta haggan bhaná.
A wolf fell upon the flock and the dog ran off to ease himself (i.e. pretending).
68. Chhattí pái mahr nún te mahr ghattí shahr nún.
A fine was put on the mahr (headmen) and the mahr put it on the village.
69. Chiná wí anán vich te gandí ran wí rannán vich.
Both chiná is found in wheat and a foul woman among women.
70. Júh, jawáhir, kaprá dithe ute múl.
Lands, jewels, clothes are priced on sight (after being seen).
71. Ag láwan nún ái te ghar dí sáín ban baithí.
She came to get a light and now has established herself mistress of the house.
72. Kúrá bole te pathar tole.
To tell lies and to weigh stones (are alike).
73. Andar bhánde sakhane báhar chour chapat.
Inside empty plates and outside a waste.
74. Anhá chatták te áshik.
A blind man loves the very sound of quarrelling.
75. Píú na mání tukal putr tírandáz.
The father never shot a child's arrow and the son is a bowman.

76. Náíán dí gáú kúbhárán dá vachcha.
There is a standing quarrel between these two classes making it impossible for one to own the cow and the other the calf.
77. Dárhí nálon muchhán vadh váindíán.
His moustaches are growing longer than his beard.
78. Billí nún chhichhrián díán khábán.
A cat dreams ever of cat's meat.
79. Khwájá dá gawáh daddá.
Frogs are witnesses to a river.
80. Uchhá lammá ghabrú palle thíkrián.
A tall strapping fellow and nothing but bits of tile in his pocket.
81. Koh na chalí te dam Sháh Jíwana.
You have not gone a kos and are as much out of breath as if you had walked to Sháh Jíwana.
82. Roze bakhsháwan gayán te Namázán had payán.
They went to get exemption from a fast and they have had more prayers imposed. "Out of the frying-pan into the fire."
83. Kutte sandhí puehhalí kadhín na sídhí ho.
Like a dog's tail (it) never stands straight.
84. Sindh sádikon, Danda munásikon, Chenáb choron, Rávi markhiton, Nílí darweshon.
The Indus (is the home) of honest, the Thal of dishonest men, the Chenáb of cattle thieves, the Ravi of informers, the Sutlej of fakirs.
85. Gájrán dí muhassalí, maghz sirdári dá.
His business is to watch carrots and his carriage that of a Sirdar.
86. Illat na vaindí iltíán ádat mud na já,
Ut kanikkí choriye chun jáwái khá,
Kuttá ráj baháíye chakkí chattan ja.
Nature is not to be reversed, nor are habits ever lost.
If a camel is turned into a corn field he picks out and eats camel thorns.
If a dog is set on a throne he goes off to lick the handmill.

87. Jat agán mujrá te gadhen agán gúr.

A tamasha in front of a Jat is as putting gur before a donkey.

88. Jain val kumbhári várí usí dá,

Jain val muhassil fasl usí dá.

He with whom the potteress is on good terms gets the turn (at the hand mill) and the muhassil's friend the harvest.

This was quoted to me openly in regard to a case in which a friend of one of the Superintendents was engaged. The handmills for grinding corn in Jhang belong almost entirely to potters who charge a small fee for the use.

89. Na yak lukma fajr dá na das lukma shám.

Na das karár pukhta na yak khoja khám.

A mouthful (to eat) in the morning is better than ten in the evening, and one inexperienced Khojá than ten experienced Karárs.

J H A N G :

SETTLEMENT OFFICE :

The 18th May, 1881.

E. B. STEEDMAN,

Settlement Officer.

áí bándé sir te chhatte shán de.
na máriye jithe kariye kaul zabán de.
ith rings in her ears and undecked hair of raven hue on her head.
raw not back where your tongue has promised.

Digke sathhar payán bhúli hósh jahán dí,
Jhóli vich parwán mehne tán bál nádán de.
Fallen, I lie at length, all worldly things forgotten.
Taken and accepted are accusations about you, inexperienced youth.

A mil kadhán, pattan berí Maulá chá dhoe táng dí.
Uh putlí galdí he jis nún apar jawe tá dukán dí.

Meet me sometime. May God bring the boat to a safe landing place.
That lover wastes away whom the fire of the shop reaches.
Note.—Táng is a good landing place and is often used where there is only
one branch of the river to be crossed.

2. Hans khará he maghán de bhúl bhúláwe.
Jithe vahe kalám kazá dí uthe kisi dé pesh na jáwe.

A swan is standing disguised in the guise of a goose.
Where the pen of fate runs, there no one's influence avails.

Khet jigar de vadh leáne ghat ke birhon de láwe.
A mil kadhín rándí dí kíwen rahn viháwe.

He reaps the harvest of the heart using the snares of love-sickness.
Meet me sometime, how else is the night to pass for me weeping.
Viháwan—to cause to move.

Láke torí ne unhánde te asáde rah chuke dáwe.

Dholá Míán, hú! hú! hú! (This is the proper ending of a Dhola in Chiniot.)

(The vows) he made he has broken. He and I have no longer claims on each other. O, my friend. *Note.*—Ne=usne.

3. Phad na wíni níhún mere sang dá,
Ajjab tamáshá dithá Rangí de rang dá.

Seize not my wrist you who are not of my sort.

I saw a wonderful sight of the Omnipotent.

Note.—Ditta=given, ditta or ditha=seen.

Kúaríán zulm karendián zarra khauf na aune angrezán dí band dá.

Ráje Bhój rangián de ditte múh karyále, inhán nárín nún hukm tází de tang dá.

Girls are tyrannous, little fear have they of the Englishman's imprisonment.

They have put bits in the mouths of men like Rájá Bhój. These women have the power of the horse's girth, or can order a horse to be girthed.

Jahríán lamhe pawan parníke vadh jáwan nak sauman de.

Shekh Sádí horen gae kitábán nún sárke.

When women fall astray after marriage, their relations' noses are cut off.

Shekh Sádí and others went away after burning their books.

Dúwá kahrá hówe jahrá ákhe main hán wákíf rannán de rind dá Dholá Míán, hú! hú! hú!

Who else can there be who can say I am acquainted with the wiles of women, O my friend.

4. Cholí pahlí gal ghattí síke.

Vagýá jáná en ján merí de piyále piké.

With my first boddice thrown over my { breast } after sewing it—are you
going off having drunk up my life's drops? (The cholí is only worn by marriageable girls).

Assán terá kí rinjánán, ján merí, mur áwen nazdíke,
Is gal nálon mar jáwán táu bhalí hán kí lená jike.

How do I displease you, my life, come near again.
If I die for this, then am I happy, what profits life.

Sajjan dián tángán rakh sowaní hán Sunj payán jághán,
Sútí pái kolon gae jhok ladike. Dholá Mián, hú! hú! hú!

Waiting for my lover am I sleeping. Waste lie the dwellings.
While I slept the camel men loaded and departed from me.
Ladíke=having been loaded, p.p. ladiwan, to be loaded.

5. Rangín Maulá jaindí kul khodái,

Khándánán nún khatre pae gae jadán ámdan farangí dí pahle áf.

Wonderful is God to whom all creation belongs.
The mighty ones trembled when the arrival of the Franks first came.

Aundeán kho lián tupkán te talwárán, sote háth napáe,
Likhe te amal karende, unj samajh na paundí kái—Dholá Mián, hú! hú! hú!

When they came they took away guns and swords and put staves in our hands;
They act on the written (law), we can't understand it at all.

6. Kanní bünde ter chádar baggí.

Jahrí chát ishk dí nál bodián de lagí.

With rings in ears and a white cloth round her loins.
The evil that is of love has fallen on me from childhood.

Hun sadi terhwín sach thora kúr honde thaggí,
Leke challín hun nál assánún main lar túháde lagí.

Now is the 13th century (Hijra) but little truth, falsehood (and) treachery
are found.

Now take me with you,—I am at your disposal, or you are responsible for me.

7. Kanní bñde hathñn kangan gajarí,

Merá dhól túráó kol ghat bhúláe jhagre.

With rings in my ears and embossed bracelets on my hands.

My lover now going away has with me dissipated quarrels, or made me forget our quarrels.

Vat hathón bhí gayán bhúle majle,

Age dukh puráne hun hathón ghat gayún sajre.

Again have you slipped out of my hands foolish lover.

The griefs that were before old have now indeed been made fresh.

Note.—Gayún and gayán, these are so in the original. I cannot explain the two forms. Is gayán=gaye en=gae ho and gayún another form of the same tense and person?

Sik dí marjáwamán val á le assán khabre.

I shall die of waiting return (and) see how I am.

8. Phad ná wíni tere andar tár ishk dí hale.

Baráí main ús dí jánán jahrá chát birbón dí jhalle.

Take me not by the wrist, within you the chord of love vibrates.

I recognise his greatness, who can sustain the stroke of love sickness.

Majnún khalián dabh jamáí sir kúháre jhalle,

Sassí shohdí ráwal húi ráh Punuan dí male.

Majnún while standing caused grass to grow (on his head, and) on his head felt the axe-strokes.

The miserable Sassi wandered { on the path
keeping the road } of Punnan.

Rodé mī Jallāli haq peone palle,

Bodī dīān sajjānūn nāl das pher unān vat kōī chārā chale.

When Rodā got Jallālī his rights fell in his lap.

With lovers from their childhood, say then is there any remedy for them.

9. Kannī būnde sir te chattīān de thabbe.

Ishk misāl badal dī khālā būhe te gajje.

With rings in (her) ears and the thickness of unadorned hair on (her) head
Love like a cloud stands and thunders at her door.

Wah lade jānde, jāni, sad nibūn dende sade.

Melā Shah Jiwana de lage.

Kul kūrīān te lauhre vendene phabbe.

They go laden, my love, when called they answer not intent on the Shah
Jiwana fair.

All the married lasses and lads are going clothed in their best.

Lauhreān de sir te chīre, nārīn de gal mashrū de jhagge.

Pīrā! Vivāhān nūn dewen bachare kūrē dāman tuhān de lage.

On the lads' heads are parti-coloured turbans. On the necks of the women
vests of striped cloth.

O Saint, give children to the married, the bachelors { are supplicating you
are holding your skirts

Inān de bathīn bakre, ek dūje de age,

Chārke mantān hat gharān nūn vage.

In the hands of these are kids, one before the other.

After presenting their votive offerings they left and went home.

3. Ap sáloyá tere áne mór de.

Yákí hoyán já vich Shahr Láhór de.

You are a fair man and your eyes are peacock's eyes.

You are become independent having visited the city of Lahore.

Gorí gujri Káhan dí pair patte dhare marorke.

Chhik chhik máre káuíán hal páe kadhe torke.

The milkmaid of Krishen lifts up and puts down her foot mincingly.

She draws the bow and shoots arrows, the ribs were broken and shaken.

Shálá, sarke vení chashmán jehrián láyán ní hór de.

O Lord, may the eyes grow dim that she brought to bear on others.

Sarke weni=sar wanjhen.

1. Kanní búde vich vále sáde.

Assán hál vanjáyá magar lag tusáde.

With rings in ears and plain earrings.

I have ruined myself running after you.

Pind vasdeán de main nún lakh múláhaze.

Belí main nún ímán barábar vāng khāne Kābe.

In regard to the dwellers of the village I have 1,00,000 anxieties.

My love, to me good faith is one and the same as the Kábá shrine.

12. Bahán bawahattá vich dháge pat de,

Yárí láwan hal vanjáwan vat kí laghná chipke.

On his arm an amulet on strings of silk.

To fall in love is to ruin oneself, what then is the use of going off secretly.

Main pachhotání hán andar dá bhet thaggán nún daske.

Láke trorí jánde guzárd nahín jhat de.

I repent of having told the secret of my heart to deceivers.

They go away after destroying what they brought, not stopping a second.

13. Chumbe dí búti hathón torí he patke.

Dúkhin páli he chúlíán pání ghat ke.

The jessamine shrub she has torn up and shattered with her hands.

She has reared it with grief, giving it water with her palms.

Súnjí, kúcbh nahín vattiyá lag magar tere,

Vasda ghar ujársán tore lakh de.

Me miserable. Nothing was gained in going after you.

I will lay waste the inhabited houses, though a lakh.

14. Ghar de Sunyáriá main nún kangan kach de:

Koul dittá ne baith fakír de mach te.

Make, goldsmith, for me a bracelet of glass:

He promised sitting on the fakir's ash heap.

Koulán dá kúra níhún áyá sach te,

Bodí dián yáran nál trot na kije.

False to his promises he arrived not at truth.

With the loves of youth do not destruction.

Níyat marendí hú dewaní aundí he hath te.

Though you follow your impulses, yet the account giving falls
(comes to your hand).

5. Kanní bünde sir te chhattián dī ghat he,
Sohne áne kóí chárwán nak he.

With rings in ears, on the head is a wealth of tresses :
Her eyes are beautiful and her nose somewhat tip-tilted.

Sir te bhochhan phabbe jis nún sában dí chat he,
Níhún kúáráú dá jíwen mahndí lá sirán nún ghat he.

On her head a charming mantilla which has the whiteness of soap.
The love of young maidens is like unto the { beautifying } of the head
with *mehndi*. { dyeing }

6. Rondá jándá merá tír firák dá,
Agan paindá mushkil sojhá rakhín ápdá.

The arrow of my separation flies weeping.
The journey in front is difficult, take care of yourself.

Ishk kohndá váng kásáyán tún wákif níhún birhón de táp dá. Dhola Mán
hú ! hú ! hú !

Love slays like a butcher. Are you not acquainted with the burnings for an absent one ; or do you not know of the fire of love sickness.

7. Karke badián hun kí vatná hen lugdá.
Tain nún hor ázár na kóí múnkh kyún jándá e sukdá.

Now that you have done wrong what is gained by concealment.
You have no other ailment, why is your face drying up.

Kitábán sat gae syáne, dárú koí na dasda.

Tain núu kaleje de dukh dá. Dholá Míán hú ! hú ! hú !

The wise ones threw down their books and departed.

No one tells of a remedy for your pain at heart, O my friend.

18. Rangín Maulá dittá shán rasúl nijár núu,

Mansab har de denewálá dittá sú malik múazzam siftdar núu.

Note.—*Su*=thá.

Almighty God gave dignity to the prophet, his favourite.

The Bestower of rank on all had given dignity to the gifted serene king.

Hukm Maliká Múázzáma vartiyá kúl zámínán manzúr kúl sansár núu.

The command of her Majesty the Queen went over all lands, accepted by all the world.

19. Kanní bünde kand pae piránde,

Yár yáran núu kanden ditte jánde.

With rings in ears (and) silken hair ties hanging down her back.

The loved ones are going, turning their backs on the lovers.

Part na vehnde ná pachchotánde.

Jínánde yár tur jánde gc úuán núu háth ví tárú nit ghote khánde. Dho

Míán, hú ! hú ! hú !

They neither turn back nor feel remorse.

Whose lovers depart it is as if to them (water) were fordable, (yet) in water they are ever sinking, O my friend.

20. Jaggá pahlá áhá pat.karam dá.

Bádhrá andrón na niklan dendá máre shán te bharam dá.

My first vest was of the silk of kindness.

The old chap allows me not to go out on account of his honour and su

Lagá gaz firák dá lathá ghund sharm dá.

A mil kadhán tore melá kar karam dá.

The arrow of separation has struck, the veil of modesty is let down.

Meet me sometime, at least meet me for kindness sake.

21. Kanní bünde sir te chatte rang de :

Mián Ránjá Jogí hoyá táin murlí á vahái vich Jhang de.

With rings in ears and beauteous tresses on head :

Mián Ránjá became a Jógí therefore came he and played a flute in the middle of Jhang.

Khúní nain arbélí thagge na rahnde chhutte tír túfang de.

Ránjhe láí Hír sálóní dhúán sek Gúrú Gorakh-Náth malang de.

Blood-shot eyes the loved one has deceived, the shot-off arrows of desire remain not.

Ránjhá won the fair girl Hír after tending the ash-heap of the fakír Gúrú Gorakh-Nath.

22. Kanní bünde vich vále rahnde,

Jithe záhrí náng kárandíe hen jehré lar bandeán nún jánde.

With rings in ears and inside are round earrings.

Where venomous snakes are coiled up which attack mortals.

Bünde báján de bachche tám jigar dá khánde,

Unán nún lekar vattan ghatte páyal bwálíán takre múl na rahnde.

Earrings are the children of falcons (and) eat the meat of the heart.

If one take and again and again (vattan) on them put fetters around (bwálíán) they do not hold fast.

23. Gorí (1) de kanní bünde gal hár Punjabi,

Chattíán dá rang saloyá bundián dí dhár piyádí (2).

Note.—(1) Of my fair one. (2) An army of soldiers.

Sutí dá mánh chumnáin payá gayá en swádí.

Látí (1) vehrá e te sas be munyádí (2).

Kissing the mouth of the sleeper you were delighted.

(1) Backbiting. (2) Unstable.

24. Chhallá lāh líyá e angal kití e kehri (1).

Main ka' gharáyá (2) e mápayán (3) tūn chorí.

Raj na ghattíá, xái sik na lathí merí.

(1) Ugly, base. (2) Got made. (3). Parents.

I had not had my full of it, my longing did not cease in the least.—e=hai

Ek jhat dá tapá (1) en, sūtí pái nūn vená en chorí,

Bodián dá karmán kúre vatna en ruse jori (2.)

(1) A stayer. (2) Bad from childhood, you are going away perjured.—
en=hain, he.

25. Kále bágen (1) koel bóle.

Vidá na kítá main tattí turde dhole.

My departing lover did not bid farewell to me unfortunate for ever.

(1) Bag=bágh.

Dukh pirote meríán hanjún jholí,

Jahre man tūn lah wanjan sajjan bháwen vaasan kolf.

Grief is in my basket, my tears in my lap,

When lovers change their mind even if their home is near.

26. Bāgh laweníán vich chá laweníán lillán,
Palkí mildián sajjanán ude kíyún chá layán dhillán.

I am about to plant a garden and to put *ber* trees in it.
When friends meet constantly, there wherefore hast planted delays.

Akhín merián vich dos na koí sauda kar liyá e dillán.
Te nárín viho dián gandalán assán nún kadh marendián karke mithián gallán.

In my eyes there is no guilt, hearts have done the business : and women,
very blossoms of poison, with sugared words are killing us.

Note.—*Gandal* is the top shoot or branch of a plant on which flowers or seeds are produced. I am told *viho da gandal* is a very common phrase indicating intense abhorrence. The top shoots of the turnip are called *gandal*.

27. Ghar de súnáriyá main nún bunde thule (1).
Chhik (2) na maríye jahre sajjan buhe awen bhule.

(1) Thick. (2) Do not turn away.

Te nárín viho dián gandalán assán nún kadh marendián deke nainán
de bhalle (1).

Iskh misál katár (2) dí kon bahke rare te jhalle (3).

(1) Spears of eyes. (2) Sword. (3) Jhalna=to endure. Jalna=to dwell.

Guríán akhín pipnián (1) chhán karendián.

Vin kamánon chhik tír marendián.

(1) Eyelashes.

28. Á var vehre, merá túhín val dhyán he,

Tore picheche paían punián (1) tand ghattan (2) harám he.

(1) A small reel of cleaned cotton prepared for spinning. (2) To spin a thread.

Ishk túsáde chá kítí án (1) mándí.

Rabb nún málam sutián nún níndr na ándí.

(1) Kiyá hai.

Áhdá áhín (1) main chhor na waisán.

Hun chhorí wainá en kahre hál jalesán (2).

(1) Ahín=thá, you kept saying. (2) Shall I pass my life.

Turyá wainá en díł nihún sahdí.

Vidá karendeán jíún kothí hán dí dhándí.

At bidding farewell as a house does (the house) of the heart fall down.

(I can't translate *jíún* in any other way).

29. Alif allah nún yád kar bandiyá jahrá valí (1) kul jahán dá.

Vat ví tobálı kar bandiyá kuchh samyáná (2) kar áp de beyán dá.

(1) Lord. (2) Arrangement, viaticum.

Hadon nahín hun mári púra ákhan kítá le ráh shaitándá.

Líkhí páse (1) na jándí jahrá líkhíyá matthe loh (2) kalám dá.

(1) On one side. (2) Of the tablet and pen.

Atharán varryán dí rát guzre koí orak (1) nahín gánj (2) da.

Deh neza barábar aunán jad tapsí hashar hamám dá.

(1) End. (2) Counting.

Válán nikkí te kanniyún trikhí laghní pursilát jithe ek dáwe nún nahín tángdá.

Hazrat Alí kháná kháwe, hath mundarná bahe pachchándá.

The bridge of Sirat { finer than
as fine as } a hair and keen as spur rowels, has to be
passed where none waits for another.

Saint Ali eats his food (and) sits with signet ring in hand cognizing.

Arshon (1) lathá dúldúl ek sukhan mange zabán dá.

Motíán dí zín orá (2) nahín lagám dá.

(1). The prophet's horse Duldul descending from heaven.

(2). Orá = orak, end.

Kháwín halál bandiyá bhate (1) munh harám dá.

Uh kadhán thairde baudiyá jinán dáman pakriyá Hassan Husen Imám dá.

(1) Foreswear, curse.

30. Merí phad na wíni samajh bál nádánán.

Wáng (1) Zúlekhán deh rát tudhe dí vahmán (2).

(1) Like. (2) Thoughts.

Páse na jándián jherián likhiyán loh kalámán.

A'srá allah dá pák sachche dián sámán (1).

(1) Hope.

Tún tur gayá en te pichhe kon phadenda (1) áman.

Main nún átan (2) múhrí (3) sunj disdián chāre lámán.

(1) Responsibility=amānat. (2) Spinning parties. (3) Poison, hateful.

Dhole de vichhore láíán jon aharán te chutdí sat vadánán.

Tún tur gayá en te pichhe abtar húián gallián phirdá e rúh mastáná.

Separation from my lover gave me blows as those of the hammer fall on the anvil.

You have gone and since the lanes have become displeasing, my soul wanders like one mad.

Sáthon gayá en kahrá mallyá e des bega.

Mil nún rihá en tore likhke ghal parwáná.

Trut gáe dí kí misál e? Jon mittar vichhar gae valí ton pattar pánán.

Of a lost lover what simile is there? As when the pán leaves have separated from the parent stem. Valí=any creeping plant, melons, &c.

31. Merí phad na wíní gallán kar na anárf.
Merí makhmal dehí (1) tún chikhá (2) te chárhí.

(1) Body. (2) Funeral pyre.

Lagí bháh bárúd nún ján sardí e sári.
Sathar te dhuen (1) sún (2) kýún rahnde nit újárí.

(1). The place where a fakir sits. (2)=Sunj.

Trut gae dí misál jún adh vich daryá de hath marende rah gae unánde
phat gae sandháre.

The &c., &c., as those in the midst of a river who can no longer strike out
(swim) and whose sandhares have burst.

32. Kannán nún búde sir te jhandán (1) dián dhajján (2).
Vat (3) langote magar belí de bhajján.

Sabhe sharm tain nún gal payán í lajján (4).

(1) Tresses of hair.

(2) Abundances, pl.

(3) To tie up, gird up.

(4) My blushes are fallen on your neck, i. e. you are the cause of the

Tere ishk nashá kítí (1) jiwen mal piwáyán bhangán.
Ráh na chhaddín kái roz tapáwín agán.

(1) As if it had bruised bhang and made me drink.

33. Kannán nún búde majh (1) chádar baggí.
Chát ishk dí mudh haddán de lagí.

(1) Loins, hips.

Ná trorián trutdí he ná jándí he chhaddí.
Túsán khadhián gálen assán jholí addí.
Bhalke túr waisán en bahní kar biháí vaddí.

34. Charkhá merá he (1) síhún jhár dá.

Khabhrián (2) tahlí díán tír (3) chír bíár dá.

(1) Of heart of wood. (2) Cross pieces. (3) Under board.

Traklá rik (1) dá gharyá kárigar lohár dá.

Nikká pái katní hán khes vádhe (2) yár dá.

(1) Wrought iron. (2) Far off, distant.

Thokke (1) únín kasabdará rupaya desán kár dá.

Bhúin na rakhín tamman zimmawár dá.

(1). To weave closely, thickly. Dont place it on the ground, to stretch out the threads is (the duty) of him who is responsible.

Dholá ghaní mud (1) na rahín kárá ek dewárdá.

Mil je milná tain vat bháwen (3) chan (2) charhayá e hár dá.

(1) A long time. (2) The moon. (3) Come what may.

35. Pár chenáo merá belí ramake (1).

Ghat janjír mere dil nún tun tunke (2).

(1) To shout, call. (2)=tunna, to draw, to drag; a well sinker when he has filled the dredge shovel, shouts out to those above—Tun, tunno.

Kedá kappar (1) jhagyá sad belí dá sunke.

Haddán nálon más kapendá rat (2) pindá punke (3).

(1) A rapid. (2) Blood. (3) Punná = to strain.

36. Assín ithe yár lamme de páse,
Ghal rumál palle báhn patáse.

Send your handkerchief after tying in it sweetmeats.

Tusán hor sahère kadhín assán ví háse,
Howasán mittíán je jholí phal payáse.

You are building up another (love), I too was (loved) once.
My longings were assuaged when I obtained what I desired.

37. Ándá te jándá ghat laghná en jhátí (1).

Jis kam dá tún sowáli hen main baithí hán játí (2).

(1) Jhátí = a glance. *Jhátí ghatná* = to cast glances.

(2) I am sitting cognisant of what you ask for.

Dehín lok lakhendá he áwen tún rátín,

Jahre apne koulán kolongae hen, únándá dharm níhún sáthí.

38. Kanní bünde bassí (1) sohndí he gal nún,

Main kadhán ákhyá he, dholá, charh jáwen márú (2) Thal nún.

(1) A necklace. (2) Wild, terrible. *Márú Thal* and *tattar Bar* are common phrases.

Vagyá vená hen ag lagí he rang mahal nún,

Dhattá he kingrá (1), morí (2) húi e rang mahal nún.

(1) Cornice. (2) Mori, indented, in ruins.

A' vehre phal lagá e nágar val nún,

Unj na sik lahndí he, chamar já gal nún.

Come into the yard, the parasite creeper is bearing fruit.

I do not lose my longings so, embrace me.

The Nágar val is the parasite so commonly seen on *ber* trees that never fruits.

JHANG:

SETTLEMENT OFFICE,
The 18th May 1881.

E. B. STEEDMAN,

Settlement Officer.

APPENDIX 8.

*Specimen lists of Kamidna Fees payable in selected villages of Tahsil Shorkot,
District Jhang.*

MAUZA ISEWALLA—KACHI.			MAUZA AHMEDPÚR—SAILÁB.		
	Nature of Fees.	Amount per well in Topahs.		Nature of Fees.	Amount per well in Topahs.
Laihar—Reaper ...	$\frac{1}{16}$ th ...	120	$\frac{1}{16}$ th ...		120
Lohar—Blacksmith	1 puli + 1 gadda + 2 topas per karwár ..	36	1 gada + 1 topa per karwár ...		16
Kumhar—Potter ...	Do. do. do.	36	1 topa per karwár ...		12
Tirkhan—Carpenter	Do. do. do.	36	1 gada + 1 topa per karwár ...		16
Nái—Barber ...	1 puli + 2 topas per karwár ...	32	1 topa per karwár...		12
Muhassil—Watchman	4 topas per karwár ...	48	4 topas per karwár		48
Chajji—Winnowers ...	Do. do. do.	48	Do. do. do.		48
Dharwai—Weighman	$\frac{1}{2}$ topa per karwár ...	6	2 topas per karwár		24
Kiráyá—Carriage ...	2 topas per karwár ...	24	4 topas per karwár...		48
Jak Rasúl Arwáhi ...	2 topas per karwár ...	24	1 topa per karwár ...		12
Talla Masária ...	...	...	12 topas ...		12
Gahera ...	..	...	...		...
Moháná ...	...	...	1 gada + $\frac{1}{2}$ topa per karwár ...		10
Chúra ..	1 gada per well ...	4	...		...
Talwára ...	12 topas ...	12	...		..
Malikána fees ...	4 topahs ...	4	...		...
Miscellaneous, reli- gious and charitable	15 topas ...	15	6 topahs ...		6
Total per well ...	...	445	...		384
Fractional share of gross produce ...	...	23.2	...		20

JHANG :

SETTLEMENT OFFICE,
The 18th May, 1881.

E. B. STEEDMAN,
Settlement Officer.

APPENDIX 9.

List of Government Notifications issued regarding the Jhang Settlement.

Financial Commissioner's Book Circular XXIV of 21st December 1874.

No.	DATE.	ABSTRACT.
208	9th February 1875 ...	Placed the Jhang District under re-Settlement. Appointed and conferred powers on the Settlement Officers.
209	Do. do. do.	Do. do. do. do.
210	Do. do. do.	Do. do. do. do.
211	Do. do. do.	Do. do. do. do.
1023	21st July 1875 ...	Amended paras 3 and 4 of Notification No. 208 of 9th February 1875. Directed that the Settlement of the Gárh Maharájá and Ahmadpúr Parganahs would be a First Regular Settlement.
1328	14th September 1875...	Added four villages to the list published in Notification 1023, above quoted.
63	18th January 1879 ...	Cancelled so much of Notifications 208-210-211, as conferred Judicial powers on the Settlement Officers. Restricted their jurisdiction to suits under the Tenancy Act. Suits under Section 20, Act XXVIII of 1871, and suits under Section 9 of Specific Relief Act, 1877.
1236	17th November 1879...	Amended Notification No 63 by empowering the Settlement Courts to try suits brought for declaration of title brought by parties in possession of the rights claimed.
442	13th May 1880 ...	Withdrew the jurisdiction to try suits relating to land from the Settlement Officers of the Jhang district.
370	12th March 1875 ...	} Conferred powers on various Settlement Officers of the Jhang Settlement, or withdrew them.
1519	29th October 1875 ...	
89	} 25th January 1876 ...	
90		
354	25th March 1878 ...	
1211	29th November 1878...	

JHANG :
SETTLEMENT OFFICE,
The 18th May, 1881.

E. B. STEEDMAN,
Settlement Officer.

